THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

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THE BREEDING AND REARING OF DOMESTIC ANIMALS.

The farmers of the United States possess every advantage to excel in the breeding and rearing of domestic animals. They have an abundance of land for tillage, meadow, and pasture; and climates admirably adapted to the production of grass, roots, and grain. Horses, mules, neat cattle, sheep, and swine, are healthy, sufficiently long-lived, and profitable, when skilfully managed. In nearly one-half of the States, a good mule is worth $100, and an ordinary one of fair size is worth $70; while the cost of rearing until he is three years old, is no more than to keep a steer to the same age. As a mule will perform hard labor twenty-five or thirty years, or more than twice as long as a horse, particularly at the south, the demand for these field servants keeps pace with the wonderful consumption of calico, shirting, and other cotton fabrics. Mules are wanted for growing tobacco, which two-thirds of the men, and boys over ten years old, either chew or smoke, or both, every day in the year. For the culture of corn, as well as sugar cane and rice, mules are much preferred to horses; the latter, however, sell high in the southern States, for carriage use and riding. The wife of almost every planter who is doing well, keeps her carriage and a pair of horses worth from $200 to $500; and every son and daughter big enough to ride, wants a saddle-horse besides. As population and wealth increase throughout the country, the demand for fine animals of all kinds augments in an equal if not a greater ratio. Ordinary cows sell in Georgia at from $6 to $10 a head, extraordinary ones bring readily from $50 to $150 each. We saw a native cow sold at the latter price at the State Fair in 1849, not so good as we have bought in Erie county for $13.

No other department of rural industry pays so well at this time as the breeding and rearing of superior stock. This is a branch of business which nearly every farmer thinks he understands perfectly, but after all, the results of his practice prove that he is mistaken. A large share of the best stock imported into the United States has deteriorated from the carelessness or ignorance of those into whose hands it has been committed. Until the art and science of breeding and keeping domestic animals are more generally studied, and more highly esteemed, the number of first rate horses, mules, neat cattle, sheep, and hogs, will be comparatively small. We have recently estimated, in a public document, the number of horses and mules in the country at six millions, and we are confident that their average value might be increased, by a course of skilful breeding, in a few generations, $30 a head. This would be equivalent to creating a capital of $180,000,000. A horse or a mule worth $90 dollars is as easily kept when reared, as one worth but $60; and the same rule applies to the rearing and keep of swine, sheep, steers for the shambles, working oxen, and dairy cows. The farmers of Belgium and Holland make more beef, according to the area under cultivation, than is produced elsewhere in Europe, and they market most of their cattle before they are three years old. Every calf designed for meat, should be ready for the butcher by the time a thousand days have passed over its head; and it should never form less than a pound of good meat in twenty-four hours, for its owner.

How can a farmer use the digestive organs of a calf 1000 days to the best advantage? An engineer is required to study every part of the machinery under his control. He must be familiar with the building and strength of each tube, valve, cylinder, and joint, in the most complex steam engine, to work it with the largest profit. What is a calf, colt, pig, or lamb, but a small locomotive in the hands of an agricultural engineer? How few engineers of this class have carefully investigated the nature and strength of the complex machinery which elaborates milk, butter, cheese, wool, meat, or produces the valuable physical powers of the ox, mule, and horse? The time has come when the anatomy and physiology of these wealth-creating animals should be universally understood. Their internal organization and external symmetry, their intrinsic value and productiveness, as well as beauty, can never be fully appreciated before science enlightens the understanding of the stock-grower. That all kinds of food in all sorts of conditions may be given to cattle, sheep, and hogs, with equal benefit and profit, no one pretends; but when we presume to say how animals shall be fed, and what they should consume, there are almost as many opinions as farmers. Where butter is high, and calves are reared on skim-milk and butter-milk, experience in Europe has confirmed the teachings of science, that molasses, used to sweeten milk deprived of its butter, is the best substitute in the system of the calf. Bread and sweetened water may not be so nutritious in the stomach of a growing child as bread and butter, but it is better than bread and pure water.

Both molasses and sprouted barley have been successfully used in England in fattening bullocks and feeding milch kine. Many say that to malt barley sufficiently to develop its saccharine properties, increases its fattening powers, perhaps by rendering all its starch, gluten, and other protein compounds more easily digested.

Who has ever spent a dollar to learn what part of the nutritive matter that enters the stomachs of his horses, cattle, and hogs, passes through their systems undigested? Who can say how much is wasted in generating extra heat, by reason of the fact that animals are exposed to severe cold and storms in winter? All experience confirms the statement that, in a degree, external warmth is equivalent to food. The living locomotive must have a given degree of internal heat, or all the machinery stops forever. The heart ceases to beat, and the lungs to inhale a single breath, if the fire within or the solar warmth without be too feeble for the purposes of life. A comfortable degree of external heat united with proper ventilation, for the benefit of all bipeds and quadrupeds, is a matter of universal interest. Warm houses, barns, stables, and pig-pens, with an abundance of good food, and that skilfully prepared and economically consumed, are points often overlooked even by intelligent persons. The keep of animals governs their gradual improvement or certain deterioration. Attentive and proper feeding, with the judicious selection of males and females in propagating any race, constitute the cardinal points in stock-raising. One should be careful to provide a plenty of pasture, and that fresh and sweet, for consumption in spring, summer, and autumn, and a plenty of well cured forage for winter. Pastures and meadows have been sadly neglected, and their failing productiveness has attracted our attention in all the States we have visited, which are not a few. They greatly need a liberal covering of stable manure, re-seeding, and a good scarifying with a sharp harrow. Many need draining, and still more irrigation, which adds wonderfully to the growth of grass and the improvement of grazing and meadow lands. Water in springs, brooks, and creeks, abounds in the mineral and organic food of plants; and in thousands of ravines, dams and ditches may be cheaply constructed, to turn it over extensive fields.

The soiling of cattle is gaining in public favor every year where it is tested by experience. By feeding stock in small enclosures, a large share of the fence now required in this country, may be dispensed with — an object of no inconsiderable importance. All good farmers recognise the necessity of either making or purchasing an annual stock of manure; and with this they can cut grass, clover, corn, or other forage enough from an acre to keep one and perhaps two cows the year round. The droppings of horses and cattle on pastures, while feeding, are found to be of little value; too much manure is applied at one place, and none at all over many square yards. Sheep distribute the raw material of crops more evenly, but not so well as it can be done by the husbandman. Stock-growing, manure-saving, and the economical production of grain and grass, must be blended into one system of tillage and husbandry. Much of the manure now manufactured is poor stuff, and really not worth over half of what it costs. Not a little trash is hauled ten miles out of the city of Washington, to fertilize poor soils, which is of as little value for manure as a load of pine chips.—Good manure is worth its weight in timothy hay, and often its weight in corn. The science of producing manure is quite as important as that of transforming grass, grain, and roots, into meat, milk, wool, and the flesh of horses and mules. The best manure sold in Washington brings four dollars a barrel, and it is worth that to make into wheat at a dollar a bushel. This fertilizer comes from the Pacific, on the coast of Peru, and from small islands covered thirty feet deep with guano, which is there estimated at thirty millions of tons. Manure of equal value per cwt. can be made at home, provided farmers will give instructions to their legislators to foster agricultural science.

As a general rule, it is safe to say that one-third, if not one-half, of the fertilizers voided in stables and barn-yards, are never carried out upon the fields whence the crops that fed the animals were taken. To waste manure and impoverish land, is not the way to produce cheap beef, pork, butter, cheese, and wool, for any considerable number of years. The manure of a fattening pig is worth nearly half as much as his food, provided one knows how to use it to the best advantage. Meat sells at about the same price in Belgium that it does in the State of New York, and of course grass is worth about the same. The manure of a cow in Belgium is often sold at from $12 to $15 a year. How can this raw material of crops and beef be more valuable there than here, provided our crops and beef fetch as much per 100 lbs. as theirs do? They send vast quantities of meat to London, and so do we, more or less. The truth is, we have yet to learn the money vaule of good manure, the art of saving it *all*, and the economy of selling fat heifers and steers when two years old, and fat pigs when from nine to twelve months old. A calf can extract more meat from 100 lbs. of oat, corn, or barley-meal, well cooked, by 40 per cent., than a six year old cow or ox can. Pea and bean porridge for pigs and calves, will make them grow rapidly, and are much used for that purpose on the continent. One that has a plenty of rich manure can make cheap oats and corn for feeding all domestic animals; and if these are the best, they will pay a round profit.

Too little attention is paid to the saving and liberal use of grass seed by dairy-men, wool-growers, and such as make a business of rearing horses, mules, hogs, and neat cattle. After all that has been said about making two blades of grass grow where only one grew before — a proverb older than the time of Jacob, in all probability — the neglect of grazing lands is a prominent defect in modern husbandry. Go where you will, and you shall find mean cattle, hogs, sheep, and horses, where pastures and meadows yield little food for domestic animals. To pay high prices for improved breeds, and then run them down in size, form, and value, by injudicious keep, is the height of folly. Hence, instead of commending Short Horns, Herefords, Devons, Ayrshires, or any other race, we content ourselves with urging the necessity of providing an abundance of food, adapted to the constitution and habits of the animal, which may be regularly consumed every day in the year. Sheep that have a feast three or six months and are then half starved an equal length of time, never clip even wool. The staple is materially affected by all changes of this kind; and every dairyman knows that to give cows only half allowance ten days in June, will diminish the yield of milk, butter, and cheese, for six weeks thereafter. Many interesting experiments on

this point have been tried in Europe, the results of which are highly instructive. The transformation of grass, roots, and grain, into milk, meat, and wool, is now treated of as a branch of *manufactures*, in which labor and capital must be vastly more concentrated, to give the highest attainable profit. Instead of being so anxious for an illimitable "range for stock," as western and southern growers demand, bring the whole operation into a narrow compass, and add four-fold to the natural productiveness of the soil, and at the same time make one animal worth three or four common ones.

WHEAT-CULTURE IN THE GENESEE VALLEY.

In commenting on Prof. JOHNSTON's description of American agriculture, the editor of *The Plough, the Loom, and the Anvil*, has this paragraph:

> We should have been surprised too, to learn what he avers, that in Genesee, "where the land is [we suppose he means naturally] more fertile than in any part of Great Britain, they were laying their lands down to grass because they *can not afford to grow wheat.*" We should, we say, have been a little surprised at the annunciation of the fact as to Genesee, had we not been so recently told by the Hon. WILLOUGHBY NEWTON, in his admirable address at Baltimore, that "the Genesee valley has fallen in production *from twenty-five to ten bushels of wheat per acre.*"

We often meet statements similar to the above, in our exchange journals, and the opinions therein expressed prevail very generally in distant States. Had Mr. NEWTON reversed the story, and said that the oak-barrens "in the valley of the Genesee," and especially in the towns of Wheatland and Caledonia, which in a state of nature produced only ten or twelve bushels per acre, have been so improved by good husbandry as to yield crops twice as large, or nearly twenty-five bushels per acre, he would have come very near the truth of the case. There are but two wheat-growing counties, properly speaking, in the Genesee valley, viz: Monroe and Livingston; and we hazard nothing in saying that no other two contiguous counties in the Union will show, by the U. S. census, equal crops of wheat, although the valley of the Genesee has been forty years under the plow and harrow by excessive tillage. Monroe county beat the Union in 1840, and will do it again, although there are many larger counties. Her closest competitors are in Western New York and Ohio.

While defending our friends from the charge of having so exhausted their lands that they can "no longer afford to grow wheat" upon them, they will permit us to suggest the propriety of taking a crop of wheat once in four, instead of two or three years, from a field. By taking pains to fertilize the soil through the agency of clover, gypsum, and manure, three crops of an average of 33⅓ bushels per acre may be harvested in twelve years, or 100 bushels in that length of time. Now, if you sow this land six times to wheat in twelve years, neglect manuring as you will, and lose all the pasture and hay that will grow in three years, lose the extra tillage, extra seed, and extra harvesting; after all, you will reap only 100 bushels of wheat, being an average of 16⅔ bushels per acre, for each crop. This last system is the sure way to impoverish arated land; because much of the organic and inorganic elements of crops, which tillage renders soluble and rains actually dissolve, flow with surface and spring water into creeks, the river, and lake Ontario. Keep land in grass or clover three years in four, and carefully save all the liquid and solid manure which the grass and hay yield, whether consumed by sheep, cattle, swine, or horses; and while your wool, pork, beef, and young horses, will bring a fair profit on their cost, your crop of wheat on the four year rotation will equal two ordinary crops, and be produced at the minimum expense per bushel. In this way you can keep double the stock, sell butter if you prefer it to wool, have your farms in first rate condition, and *increase* instead of diminishing your annual harvest of wheat.

Too little attention is paid to meadows and pastures—to making manure from the hay that may be cut by draining swamps, marshes, and swales, so that herds-grass, timothy, blue-grass, and English ray-grass will flourish on these low, wet places. We well remember many such unprofitable places, unsightly wastes, in Monroe and Livingston counties. A great deal of the cream of uplands now devoted mainly to wheat-culture, has been washed into these basins of variable extent and depth. Make this cream into grass, the grass into manure, and the manure into corn and wheat. By this operation, not only your wheat and corn crops may be doubled, but a double growth of clover in pastures and meadows may also be realized. It is not more land, but more skill and more science that you need, although we have long maintained that the readers of this paper in Western New York are the best farmers to be found in the United States. Many of our friends from the south will visit you at the next State Fair, and we have no apprehension that all we have ever claimed for the valley of the Genesee, will not be conceded as true to the letter and spirit of our commendation.

Mr. NEWTON, whose remarks we have copied at the commencement of this article, paid $1000 for guano, last fall, to put on his wheat at the time of seeding. He says that on a farm recently purchased he will harvest as many bushels of wheat next season, with ordinary luck, as it cost him dollars. He is a Virginian, and applies 200 pounds of guano to the acre, which gives an increase in the crop, beyond what the soil would do without the manure, of some ten or twelve bushels. That is to say, 600 pounds of wheat are the product of 200 of manure. Some of our Genesee friends in Monroe and Livingston will remember how often we have called their attention to the interesting fact, in public lectures, that a barrel of flour of 196 lbs., contains 187 lbs. of carbon and the elements of simple water, the other 9 lbs. being nitrogen and incombustible earthy matter. Mr. NEWTON has paid four dollars a barrel for manure to apply to his wheat crop, and found it to return a good profit. Rely upon it, there is something in the growth of wheat and in the chemical composition of manure, not sufficiently understood by most wheat-growers. In England, where both fertilizers and grain-culture have been investigated with extreme caution, every pound of ammonia in guano is estimated at six pence sterling, or eleven cents our money, calling wheat worth five shillings. Phosphate of lime is worth three farthings a pound, and potash about a penny more than in this country.

Rochester can easily furnish the raw material to form 300,000 bushels of wheat a year, so far as it is lacking in the surface of the earth. It ought to be a model city, surrounded by a model farming community—both co-operating to carry back in fertilizers, and bury in cultivated soils, every thing that will render either the atmosphere or water of the

city impure and pestilential. The same dissolving elements of human food that poison the air and water consumed by the denizens of a city, will form the cheapest wheat, corn, and potatoes, a farmer can grow. Both parties must labor together, and for a common purpose, if both would prosper.

A FEW SUGGESTIONS FOR THE N. Y. STATE AGRICULTURAL SOCIETY.

This Society stands at the head of all agricultural progress in America. It occupies a proud and enviable position, and if true to itself and the great cause to which it is devoted, its distinguished friends will be remembered with honor long after mere politicians, whether Governors or Presidents, are forgotten. It labors not for the things of a day, but for interests that will be as fresh and commanding a thousand years hence as they are at the present moment. The ministers of the enlightened nations of Europe, at Washington, seek copies of its Transactions as a work of rare value, for the instruction of the friends of agricultural improvement in their respective countries. We have just given our last copy to Sr. Von Geralt, Minister Resident of H. M. the King of Prussia, who takes a deep interest in all our agricultural organizations. If the Executive Committee of the N. Y. S. Society will place a dozen copies of its Transactions at our disposal to go abroad, it will enable us to secure valuable contributions to its Library—an object of no inconsiderable importance. We are happy to say that Mr. Webster enters cordially into the policy of advancing American agriculture, by obtaining through our representatives at foreign courts, and consuls in all commercial cities, whatever seeds, cuttings and books may contribute to the promotion of rural arts and sciences in the United States. As our national ships visit every port, their officers, without inconveninee, can bring home any thing which may be useful and desirable, free from charge. American seamen are particularly interested in having the provisions on which they subsist for months in the tropics, as well put up in this country as in any other—a thing not now done.

What is there to prevent the N. Y. State Society obtaining 1000 life memberships at ten dollars each, under the new fee, and applying the $10,000 derived from that source to the purchase and equipment of an Experimental Farm? There is not now such a farm in America, and the honor of putting the first in complete operation, would be equally great and enduring. Unless the leading men in that Society move soon, the State Societies of Ohio, Michigan, Maryland, Georgia and Kentucky will take the lead in this important matter. The Kentucky Agricultural and Mechanics Association held its first Fair last October, and it has already raised and invested *eight thousand dollars* in twenty-five acres of land and buildings.

A little well directed effort in the State of New York, (which has some 265,000 more people within its limits than all New England,) will command $10,000 for the purchase of a small farm of one hundred acres, and a few animals of the best breeds to stock it, as well as all needful implements of husbandry. New truths in rural science and practice, can only be elicited by the agency of new operations. Farmers may go on stepping forever in the same tracks, like a horse on a tread-wheel, without advancing in knowledge a particle; but is it creditable or desirable to vegetate in that way? The time has come when the true powers of different kinds of soils and manures should be tested in the most exact and satisfactory manner. So too the precise value of diffent kinds of food for dairy cows, sheep, hogs, horses, and oxen, should be universally known. The annual additions made to our professional knowledge are small indeed. They can be doubled and trebled, if we will only make a common effort in the right direction. Next to nothing has been done in this country to unite the best practice with the best science on the same farms. In Europe, art and science are studiously brought together to tmprove the soil, domestic animals, and, particularly, young men devoted to the profession of agriculture. We must experiment in fifty different ways, if we would develop new facts relating to rural affairs; and the plan of such experiments must be laid down by some one familiar with all the light that science has already given to the subject. Manures are destined to become as much an article of inland and foreign commerce, as cotton, tobacco, breadstuffs, and provisions. Hence their concentration, (like guano,) and skilful manufacture, are objects of vast national importance. The great truth that one hundred pounds of manure can produce three hundred of good wheat on such poor, exhausted lands as abound in Maryland and Virginia, is no longer questioned. The economical production of artificial guano, equal to the best Peruvian, is a desideratum which ought not to be overlooked by the officers of the N. Y. State Agricultural Society. They have the position and means to do an incalculable amount of good; and the farming community will hold them to a strict accountability for the "ten talents" committed to their care, for a wise and profitable investment.

MAPLE SUGAR.

Those that intend making a crop of sugar from the "sugar tree," have no time to lose in getting everything ready for tapping the trees, hauling and evaporating the sap. Buckets or troughs are indispensable to catch the "sugar-water" as it flows from the cut in the sap-wood, and these often need cleansing and repairing. It is not every youth that can go into the woods, cut his timber and hoop ten, twenty or a hundred sap-buckets; and, as a general thing, it is best to employ a cooper to do the job. To make troughs is a somewhat less difficult undertaking, provided one has trees of the right size that are free-rifted and split well through the heart. We have had some experience in making troughs, hooping buckets and large tubs for storing sap, and know that good timber is the important part of the operation. The complex and beautiful machinery that manufactures water pails, keelers, and wash-tubs, so rapidly, would be just the thing to work almost any soft wood into convenient vessels to hold sap, as it flows from the trees. Assuming that one has a supply of good clean troughs or buckets, a reservoir at his works perfectly tight for holding one or two days' run of the bush, he should then provide a horse or ox-sled rigged with a sixty gallon cask, (this is large enough for a single horse, a pair of oxen or horses can easily haul a much larger one,) for gathering the liquid which is to yield the sugar. A cask with two heads entire, fastened to the sled and having a large funnel made of a bucket which will hold a pailful, placed over the bung to receive the sap, as it is taken

from the trees, is the best contrivance. Fair roads should be cut all through the sugar orchard, if it be not completely under-brushed: and when a load of sap is brought to the camp the reservoir should stand a little lower than the sled, so that by pulling a plug, or turning a faucet, all the sap in the hogshead on the sled will run without labor into the storage tub near the evaporating pans or kettles. To carry sap in buckets on one's neck and shoulders with a yoke, as many a reader has done, through deep snow, seems very much like hard work.

That side of a tree which has the larger part of the top, and grows most thriftily, with the biggest roots, will yield the most sap, if properly tapped. If one begins early, the south side is best, other things being equal; if late, the north side should be preferred. There are many facts pertaining to the flow of sap, which are involved in much obscurity, such as the influence of the wind, sunshine, freezing at night, &c., that somehow modify the ascent of liquid, and, perhaps, the descent, in the vascular system, and the evaporation of water at the terminal buds. Where the sugar comes from, and how it is formed, are quite as curious studies as the way in which its circulation is kept up before the tree has any leaves to aid in the operation.

We are not disposed to enter into either a physiological or chemical discussion at this time, but aim to give a few practical hints on sugar making. As in the dairy business, one's kettles and utensils of every name should be perfectly clean and sweet, and the syrup should be settled ten or twelve hours before it becomes molasses, to remove all fine particles of dirt which no cloth strainer can seperate. This, with judicious skimming, will give pure sugar, which can be farther whitened by percolation, if desired.—As the trees that yield this delicious sweet are cut down, and fine maple sugar and syrup become scarce, the price advances and their manufacture becomes more of an object. We have seen a good many tons of good maple sugar sold at five cents a pound; and it was once thought a liberal price, when wheat brought but thirty and forty cents in Western New York.

Instead of having to dip cold sap into boilers, it is much better to have a small stream constantly running from the reservoir into the kettles just equal to the liquid driven off in vapor. In this way there is little danger of the syrup boiling over and being wasted, or burning on the sides of the ketdes, and no time is lost in bringing the liquid up to the point of ebulition. To decide when the sugar is evaporated enough to cake well, is a matter that experience alone can teach. A plenty of dry wood, a comfortable house, kettles well set in an arch, with conveniences for filtering and settling syrup, and "sugaring off," are all points not to be overlooked where the business is prosecuted to any extent. From 8,000 to 10,000 lbs. are the largest quantity that we have ever known manufactured in one orchard in a season. Mr. MARTHER, of Fairfield, Herkimer county, N. Y., formerly, (about thirty years ago,) often realized $1,000 for his sugar crop; but of late years, the saccharine matter of sugar cane has nearly driven that of the *acer saccharinum* out of the market. Land that bears a fine growth of rock maple is usually valuable for tillage, meadow and pasture; and unskilful tapping, in a few years, will nearly destroy any tree.

SUCCESS is the child of courage and perseverance.

CORN-GROWING.

MESSRS. EDITORS:—I have a desire to communicate to you, and through the medium of your valuable paper to others, the method I have successfully practiced in growing corn for several years past—not that I claim to have made any important discovery in its cultivation, but simply to have combined and practised the experience and recommendations of men wiser and more experienced than myself. The soil that I have tilled is a gravel loam. I have usually, for corn, turned over in the month of April, or early in May, a clover sod, by plowing carefully and deep—a little deeper than ever before plowed. I have spread the manure upon the ground before plowing. I dig up the grass around the stumps and then thoroughly harrow until the surface is well pulverized and mixed. To mark the land for planting, I have used a light pole about thirteen feet long, twelve feet of which is divided into three equal spaces, four feet apart, (the distance I have between the rows) and to it I attach, by means of ropes, four pieces of chains which I have found to make the best marks to follow in planting. Two men or boys, by each taking an end of the pole, can mark both ways ready for planting, several acres in a day. The benefit of thus marking I have found to be saving of time, straighter rows, and a uniform distance between them, and also the entire independence of the planters of each other, so that boys who can plant only a part of a row and keep up, can do so correctly. I grow the large dent corn which is adapted to this climate. Four kernels are usually dropped in each hill and slightly covered with not more than two inches of earth. As soon as the corn has come out of the ground so as to be seen and follow the rows, I prepare a composition by mixing equal parts of slaked lime, ashes, and plaster, of which about a gill is dropped upon every hill of corn, and which is quickly done by suspending a pail or other vessel across the shoulders by a strap of leather or rope, walking nearly erect, and with a small shingle dip out of the vessel and throw it upon the growing corn. Should the leaves be open and the prepation drop into them it does not injure the corn. I have found this composition thus applied, to cause the corn to grow rapidly and vigorously. And also what to me has been a great benefit, crows have never pulled up any after its application, although they had began to pull before. As soon as the rows could be easily traced, I have gone between them with a horse, and a cultivator so constructed that all the earth was moved and cleaned of whatever was growing, thirty-five inches wide. The cultivator has flat teeth shaped like a common flat-iron, with a shank from the wide end eighteen inches long, and fastened on the top of the frame by screws and nuts. I have found that passing once with it has been as effectual as twice with any cultivator I had previously used. After passing both ways through the corn as above mentioned, I leave it till about the first of June, when I again go through the field in the same manner, and then thoroughly clean the hills with the hoe and hand, leaving the ground level. About the first of July I again clean the hills, after having been through as often as necessary with a horse and cultivator. The average yield per acre, in favorable seasons, when harvested, has been one hundred, or more, bu. good sound ears of corn. The cultivator is gaged by a wheel so that it can be used without disturbing the sod. The benefits of level culture I have found

to be that corn resists the winds better, extends without interruption its innumerable fibrous roots all through the earth so near the surface that they derive every benefit from heat and moisture. I have often dug between the hills when the corn had attained nearly its growth and set for ears, without finding any space that the roots did not occupy. I had designed to have written more but my article would be too long. ORANGE H. WAIT.—*Willoughby, Ill., Jan.*, 1851.

BUTTER AND CHEESE MAKING.

MESSRS. EDITORS:—I saw, in the October number of the Farmer, certain questions from the Commissioner of Patents, and a request that farmers would answer them. Living, as I do, on a farm almost new, and under rather a poor state of cultivation at that, I can not expect to furnish much information of importance; but such information as I am able to give, is at your service. My business is dairying, and what I have to say is connected with that branch of farming.

I find that my cows, thirty-six in number, have averaged of cheese for market, 280 pounds; and of butter, 48 lbs. each; besides what the family have used, which I estimate for the whole year at 600 lbs. of cheese and 500 lbs. of butter. Average price of cheese, 4 cts. 6 mills per pound; and my butter I contracted in the spring, at 12½ cts. the season through, which has been the highest price until within a few weeks. My cows have had nothing but grass, and short picking at that most of the time, owing to drouth and grasshoppers.

With regard to the comparative difference of making butter *or* cheese, I am not able to state; but the difference between making butter *and* cheese will appear by comparing the results of the following experiments:

EXP. 1. Milk skimmed and churned while sweet, and the butter-milk worked into the cheese. Milk, 720 lbs.; butter produced, 25 lbs.; curd, 79 lbs.; cheese from press, 60 lbs.; cheese ready for market, 55½ lbs.

EXP. 2. All the cream worked into the cheese. Milk, 822 lbs.; curd, 111 lbs.; cheese from the press, 92 lbs.; cheese ready for market, 86 lbs.

EXP. 3. Night's milk set in vat, skimmed in the morning, churned, and butter-milk worked into the cheese. Milk, 771 lbs.; curd, 100 lbs.; cheese from press, 79 lbs.; cheese ready for market, 74 lbs.; butter, 11 lbs.

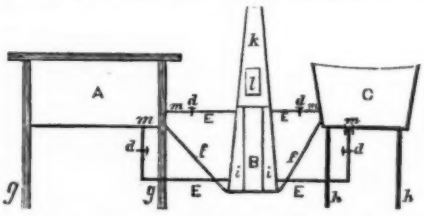
By the above you will perceive that I get more pounds of butter and cheese than of cheese alone, from the same quantity of milk. In each experiment, the milk was weighed as soon as milked.

My method of making butter has been this: In warm weather I put ice in the cream until it is cooled to a proper temperature — say, when the air is 70° or 80°, I cool the cream to 45°; when the atmosphere is from 55° to 70°, I cool the cream to 50°; and when the atmosphere is below 50°, I warm the cream — more as the weather is cooler; but in no case should it be warmer than 55° when the butter comes. In spring and fall I scald the milk when it first comes from the cow; *i. e.*, heat it to 125° or 130°: this makes it keep longer before souring, I get more cream, and it churns much easier, besides it removes all bad flavor caused by the cows eating vegetables such as leeks, ruta baga, &c.

After butter is churned I work all the milk out that I can, with a paddle, and then work in about 1 lb. of good salt to every 20 lbs. of butter. I then put it in a cool place—if the weather is warm, I put it in a tin pan and set it on the ice in the ice-house until the next day, when I work it thoroughly with the hand, being careful not to warm it so as to make it oily, and then pack it down solid in air tight packages, and keep it in a cool place. Butter made in this way has the *reputation* of being the best in market.

My method of making cheese is to warm the milk to 88°, and then add sufficient rennet to "fetch it" (as the old dairywomen say,) in about 40 minutes. I then cut up with an instrument made with a steel frame and strung across with fine brass wire. I then commence heating it slowly, stirring it all the time to prevent its sticking together, until I heat it to 108°, when I turn the heat off, cool it a little, and let it stand about half an hour. I then drain off the whey and put in 1 lb. of salt to every 20 lbs. of cheese from the press, and then put in the press.

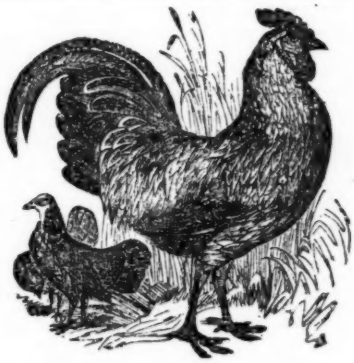
Perhaps some of my remarks may be rather unintelligible without a description of my apparatus for making cheese. I hardly know how to describe it without a drawing. I will give you a vertical section, and by that means describe it as well as I can.



A, vat of wood, with metalic vat inside. B, heater, 7 inches in diameter inside, 12 inches at bottom, 8 inches at the top on the outside, and 14 inches high. *i*, *i*, space between outside and inside, which, by means of pipes, E, E, E, E, bolted to tub and vat (C, A,) at *m*, *m*, *m*, *m*, is kept filled with water which is heated by fire inside the heater B. As the heated water rises, it passes off in the upper pipe, and its place is supplied by cold water through the lower pipe. *k*, stove-pipe with door, *l*, to supply heater with fuel. *d*, *d*, *d*, *d*, connecting cocks, by means of which the heat may be thrown either way. *f*, *f*, rods of iron to support the heater. *g*, *g*, posts to vat. *h*, *h*, posts under tub. A. BARTLETT. — *Fowler's Mills, O., Dec.*, 1850.

EXPERIMENT ON POTATOES.—In the spring of 1847 I planted potato seed in drills, it grew, and I transplanted one plant, hoed it often, and the produce was about half a pint. In the spring of 1848 I planted the produce of the one plant, and in the fall I dug one bushel of beautiful potatoes, the largest two weighing 19 and 20 ounces. I have planted seed from the ball four years in succession, and have produced some new and excellent kinds that I never saw before. I have experimented on potatoes more or less for twenty years past, in Warren county, Pa., and think that they do best of late years, when planted very early, on quick, warm soil. I have some old potatoes raised in 1849, which I intend keeping to experiment upon in 1851. SAMUEL BARTON.—*Pittsfield, Pa., Dec.*, 1850.

The Poultry Yard.

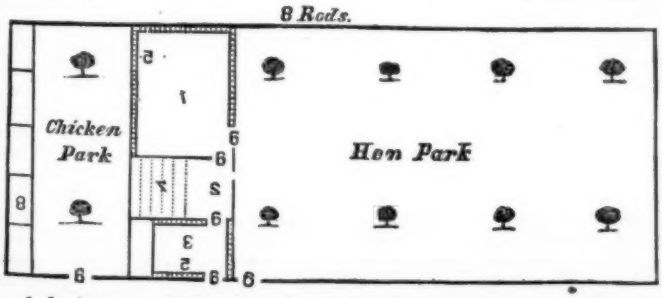


SONNERAT'S JUNGLE FOWL.

SONNERAT'S JUNGLE FOWL is found wild in the Jungles of India. It is contended by some that to this species alone are our breeds of domestic fowls to be traced. They are represented as being very easily tamed, and in their habits much resembling the domestic fowl. They are rather below the medium size.

POULTRY-HOUSE AND YARD.

MESSRS. EDITORS :—The following is a plan of my poultry yard and hen-house, which, if you consider worthy, you can give a place in the Farmer. I am induced to give this to the public, from the fact that so many are expressing a desire for information upon this subject. I think they will find it a very convenient form, and attended with but little expense. The hen-house can be made of rough boards, if cheapness is desired, and the size can be varied according to the number of fowls kept. I have 70 in mine, at present, and think three or four times as many more could be kept in it without difficulty. The park is surrounded with a picket fence five feet and four inches in height, a sixteen foot board cutting three lengths of pickets. I find this abundantly high, by clipping one wing of each fowl; thereby they are prevented from flying, in the least, as one wing being of full length, gathers air, and the other, from its shortness, cannot; so upon every attempt at flying they will be turned completely over. It is set out with standard fruit trees of various kinds, and seeded down with clover.



1, Laying room. 2, Roosting room. 3, Breeding or sitting room. 4, Bins for grain. 5, Boxes for laying and sitting. 6, Doors. 7, Poles for roosting. 8, Little sheds for chickens.

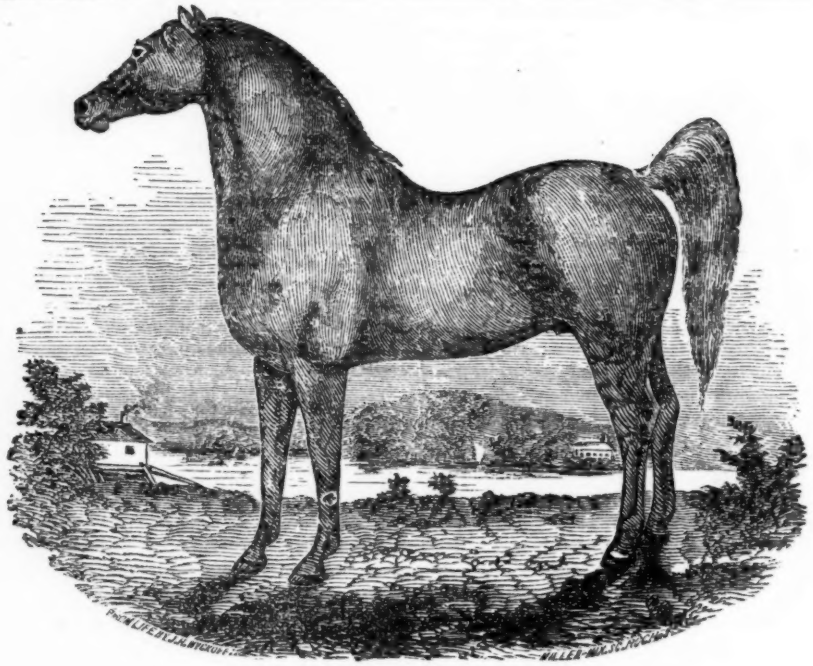
I was induced to make this division, as seen above, on account of the difficulty of sitting my hens, while among those that were laying. When a hen attempted to sit, every hen in the yard appeared determined to lay in no other nest, thus preventing them from having that quiet so necessary during incubation. When I attempted to force them to sit upon a nest, which I would make in some convenient place, by confining them upon it, I found them like other bipeds, determined to have their own way, and would stand up for days as though they feared a particle of the warmth of their bodies should be imparted to the eggs beneath them. As one of my neighbor's boys said, "they were bound *to stand up and sit.*" I now, when I discover a hen inclined to sit, make a nest in the breeding-room and shut her in permitting her to take the nest of her own accord, which she will generally do in a very short time. After the chickens are hatched, I put them, with the parents, into the small park, thus making it much less trouble to feed and attend them. S. M.—*Cameron Mills, N. Y., Feb.*, 1851.

DISEASES OF POULTRY.

MESSRS. EDITORS :—Having witnessed much valuable information from your pen, in answer to questions from farmers and others, in different parts of the country, I have been induced by the request of several of your friends here, to take the liberty of asking you a few questions respecting a disease in poultry which has prevailed here this fall and winter to a considerable extent among dung-hill fowls. In the first place they appear stupid, their eyes heavy and almost entirely blind. In the next place there is a swelling of the neck and head, succeeded by a cough peculiar to hens, and making a noise as if partially choked. In this way they linger along two or three weeks, and either die or become very poor. During this time they discharge at the nose a viscid matter, in some few instances quite offensive to the smell. If you can tell us what the disease is, or what will cure it, you will oblige many of your friends. R. H. FOSTER.—*Lyons, N. Y.*

The disease with which your fowls are affected, we should judge to be the *roup*, though a very different disease is sometimes called by this name. Fowls thus affected should be kept warm and have plenty of water and light food, such as scalded bran, Indian meal, &c. The English authors say give calomel in grain doses, made into a pill with bread, but we never had much success in "physicking" fowls. Washing the head in warm milk and water sometimes gives great relief, and if it does not effect, hastens the cure.

A farmer in this county who has had much experience in rearing poultry, informed us that he had discovered an effectual remedy for the roup, which he promised to furnish us in season for this number. If not received in time, we will give it in our next. It is represented as being a certain cure in the worst cases.



MORGAN HORSE, GENERAL GIFFORD.

MORGAN HORSE, GEN. GIFFORD.

EDS. GEN. FARMER:—The new edition of *Youatt on the Horse*, alluded to in your last number, contains a defective cut of the Morgan horse, "General Gifford." Although the publishers have given this horse the high praise (after an examination of several where perhaps a preference might almost appear invidious,) of selecting him as the best living specimen of his race to illustrate their work, it is to be regretted that a more truthful representation was not obtained. As the horse himself appears as near perfect as any I ever saw, I have procured from his present owner, Mr. INGERSOLL, of Lodi, a stereotype copy of a better cut, which I send you, thinking your numerous readers may be pleased by seeing it in the Farmer It was engraved by Messrs. MILLER & MIX, of your city, from a drawing by Mr. WYCKOFF, an artist of great merit at Lodi. Though no power of the pencil can convey to paper the animated countenance or majestic strength and beauty of the original, it is as near like to nature, perhaps, as a picture can be made, and the best of several drawings of the same horse which has yet met my eye. The proportions of the original are eminently graceful; his color a dark chestnut. He weighs about 1100 lbs., and possesses immense power for his inches. He is perfectly gentle, kind, and true, in all places, at draught or otherwise; a capital saddle-horse; and was called by his former owner, Mr. MASON, now of Syracuse, a three minute horse, as I doubt not truly, from a specimen of his speed which I then saw. J. DORR.—*Scottsville, Feb'y*, 1851.

CHARCOAL IN CISTERNS.—Two gallons of fine charcoal will purify a dozen hogsheads of water, when the smell is so unpleasant it cannot be used.

S. W.'S NOTES FOR THE MONTH.

THE leading editorial article in the last Farmer contains extracts from MECHI's lecture before the Society of Arts, which, with the accompanying editorial remarks, are worth a life subscription to the Genesee Farmer. The best mode of making and saving stable manure is there shown: and its indispensable importance to every husband of the soil must be seen, felt, and fully comprehended by the most obtuse reader; more particularly by those who have toiled half their lives in exhausting their own God-given heritage.

The great secret why China is enabled to feed such a dense population, is, their superior art of making, saving, and applying manures; the maximum vegetable product is always attained there, because every element of vegetable nutrition is saved and judiciously applied both to the soil and *in* top-dressing the growing crop. How much nitrogenous matter is lost by our farmers, that might be saved by the application of simple pulverized clay and a little common salt, to fix the volatile ammonia. How much labor is lost in loading, hauling, and spreading manure, the most important part of which is lost, either before or after feeding a single crop. LIEBIG says that the "liquid manure of animals contains nearly all the nitrogen originally present in the food consumed." How important, then, for every farmer to follow the plan indicated in MECHI's lecture—the "open floor and stable-cellar"—by the aid of which every particle of azotised matter is saved. Well may Mr. LAWES exclaim that manure may be made vastly cheaper and better by keeping stock, than by buying guano.

WHY IS THE AGRICULTURAL SO FAR BEHIND THE MECHANIC ARTS? Because, no matter how slovenly, or awkward, or neglectful, the farmer, nature will

perfect her grain and her animals, if she has only half a chance; but woe be to that mechanic, or master builder, who constructs a bad ship, that neither sails well, nor carries well, nor behaves well in a gale at sea. It is sudden death to a foundry, or a machine shop, to turn out a bad steam engine, a bad boiler, or other imperfect machinery. No matter how much the master workman may console and stultify himself with the belief that his employers are no judges; he is emphatically a laid over man. On the other hand, the farmer may go on from year to year, growing shorter and shorter crops, eschewing all the late improvements as empiricism; and in the plethora of his stolid impracticable egotism, he can lay all the blame of his short crops to the seasons. Still, he gets some corn, rears pigs and cattle to consume it, and the little surplus he sells is sometimes unexceptionable in quality, thanks to nature and not to his art. But methinks the necessity of the case is fast working out a better system of farming. Even in our favored land of alluvial deposits, the farmer has long since found that the fatness of his soil is not as indefeasible as his title to its superficial surface; hence the general movement among our more enlightened farmers to pursue a more perfect system of manuring and culture; an example that cannot fail of having a salutary influence over the most doltish one of his class.

THE CULTURE OF FLAX.—A correspondent of the Ohio Cultivator says that twenty bushels of flax seed may be grown on an acre as easily as ten bushels. He says, "as flax produces only one stem, it is absolutely necessary to sow two bushels of seed to the acre in order to get the largest yield, and to shelter the ground from the sun during the time the seeds are developed and matured; the soil should be deeply plowed, finely pulverized, and early sown, before the season of drouth arrives." To secure a perfect crop, he advises that artificial manure as a top dressing, composed of "ashes, gypsum and common salt, three bushels of the former to one each of the latter, to be applied to each acre two week after the plants appear." "On the Maume valley, as well as that of the Wabash, flax has been extensively cultivated during the past ten years, but owing to the improvident culture that has been very generally practiced, the crop has grown more and more into disrepute; hence the great falling off in supply in our markets, and the consequent very high price obtained for seed during the past two seasons." "When the top dressing is applied it would be well to seed down the field with timothy and clover, by which a luxuriant growth of clover will be obtained, even in adverse seasons for that crop. If the flax crop be pulled, no damage is done to the young clover plants, but on the contrary the loosening of the soil will impart a vigorous growth to the latter, that no other management could effect. Where it is intended at the time of seeding to pull the flax, the sowing of the timothy may be omitted until after the flax is pulled." In his next number the writer promises to give directions how to prepare the flax fiber for market. As the flax crop is a greater consumer of nitric acid, than any other crop, tobacco excepted, it is all important that stable manure should be freely applied to the soil; the top dressing above referred to will then do much toward fixing that ammonia, which alone by its transformation can supply the required nitric acid.

DO YOU TAKE AN AGRICULTURAL PAPER?—Ten years ago there was not over thirty agricultural papers, all told, taken from this Post Office. At this time there are over 150 copies of the Genesee Farmer alone taken here. Still, there is a majority of men among us rejoicing in the name of farmer, who take no agricultural paper, and not a few who take no paper at all, nor any other printed article, if we except the Physic Almanack that they receive from the apothecary gratis. Such men put about the same value on a book as the Highlander did on the watch after it had run down.—*Waterloo, Feb'y*, 1851

HAY RAKES.

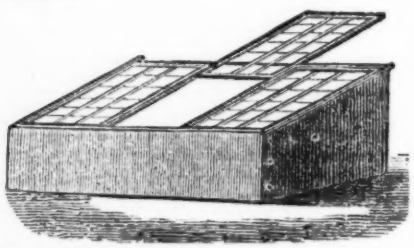
MESSRS. EDITORS:—Having noticed in perusing the columns of your valuable paper, (Vol. 12, No. 1,) an inquiry for the best plan for a Hay Rake, attended with some remarks from yourselves relative thereto, I take the liberty to write a few words in regard to Hay Rakes used in Vermont, especially in Orange county and the counties adjoining. There are two kinds of horse rakes (wire tooth) used by the farmers in this section quite extensively, and in very good repute, commonly designated the double coil tooth Rake, and Ladd's Rake—Mr. LADD being the original inventor and patentee of said rake. In performing the labor with these rakes, both are held and discharged as described in the remarks alluded to. The latter, when first introduced into the farming community here, was a revolving rake, but not giving satisfaction to the purchasers, the manufacturers of it left off the revolving part, and have succeded very well in the sale of it, and it now gives general satisfaction. The operation of performing the labor in the common way of holding and lifting up, is represented as being very hard and fatiguing by the operators, especially on large farms where there are ten or twelve acres raked in an afternoon. But there is an improvement on horse raking by the use of wheels, recently invented in this State, which greatly facilitates the labor, making it truly easy, and is highly approved of and recommended by those who have used it. It is known as Hovey's Improved Horse Rake. It is so constructed that the person performing the labor is accommodated with an easy seat, can manage the horse without any difficulty, and, by a very simple process, can charge and discharge the rake with ease and dexterity. The labor is done as fast and as well by this manner of raking, as by the common way of raking with a horse, and thought to be easier for the horse. Another advantage of this rake over others, is the saving of labor, by having it done by those who cannot do the raking in the ordinary way, or perform much amount of any labor. I know a man in this vicinity, upwards of seventy years old, who has raked from a hundred to a hundred and fifty tons of hay the past haying season with one of these rakes. He calls it a resting spell to get on to this machine and rake ten or twelve acres of hay in an afternoon. The extra expense of this over the common rake is not great, as it is not necessary to have extra wheels, the hind wheels to a common buggy waggon being generally used.

I am decidedly of the opinion that this improvement will very much benefit the farming interest and laboring agriculturists, and will take the preference over all other rakes, especially by those who are farming to any great extent. A SUBSCRIBER.—*Washington, Vt., Jan.*, 1851

THE KITCHEN GARDEN.

LITTLE can be done in the kitchen garden this month, at least in this section of country, unless it be the preparation and care of hot-beds. For the manner of constructing them, we should have referred those who have inquired to previous volumes of the Farmer; but as we now have on our list nearly twice as many subscribers as at any previous time, many have not the volumes to which we refer; we therefore republish the information desired:

Every one should have a hot bed, if it were only to forward plants for the garden. The too prevalent opinion is, that they are expensive articles and difficult to manage, requiring the skill of the professed gardener. Both suppositions are entirely erroneous. A hot-bed may be constructed by any man of ordinary ingenuity. A frame of about 12 feet long and 6 wide, which will allow of 3 sashes, each 3 feet wide will be found large enough for any family. It should be made of common two inch plank — the back about 3 feet high, the front about half that, the ends having a regular slope from back to front. This will give an angle sufficient to throw off rain, and give the full benefit of external heat and light to the plants within. If the beds are narrower, the front must be higher in proportion. The sides and ends are simply nailed to a strong post, four inches square or more, placed in each corner. For the sashes to rest and slide upon, a strip 6 inches wide is placed across the frame, the ends morticed or sunk in the sides of the frame, so as not to cause a projection. The sashes are made in the ordinary way, but without cross bars; and in glazing, the lights are made to overlap an eighth or quarter of an inch, to exclude the rain. Such a frame, costing but a mere trifle beyond the labor, will last for years, and furnish all the cabbage, tomato, celery, cauliflower, egg, pepper, melon, and cucumber plants needed—with a sprinkling of early radishes, &c. Where so large a frame may not be wanted, an old window may be used for sash, and all expense of glazing be avoided. The annexed figure will convey an idea to those unacquainted with it. One of the sashes is moved upward as in admitting air.



Hot beds should occupy a dry situation, where they will not be affected by the lodgement of water during rains or thaws. They should be exposed to the east and south, and be protected by fences or buildings from the north and northwest.

Where it is intended to merely grow plants for transplanting to the garden they may be sunk in the ground to the depth of 18 inches, and in such case require not more than 2 feet of manure; but when forcing and perfecting vegetables is designed, a permanent heat must be kept up, and the bed must be made on the surface, so that fresh and warm manure may be added when necessary. A depth of three to four feet of manure will in such cases be wanted. Manure for hot beds require some preparation. It should be fresh stable manure, placed in a heap, and turned and mixed several times, promoting a regular fermentation. It is thus made to retain its heat a long time; otherwise it would burn and dry up, and become useless.

The mold should be laid on as soon as the bed is settled, and has a lively regular-tempered heat. Lay the earth evenly over the dung about six inches deep. Radishes and lettuce require about a foot of earth. After it has lain a few days it will be fit to receive your plants, unless the mold has turned to a whitish color or has a rank smell, in which case add some fresh mold for the hills, at the same time vacancies should be made to give vent to the steam, by running down stakes.

The following is described as the German method, and we intend to try it:

Take a white cotton cloth of a close texture, stretch and nail it on frames of any size you wish; take 2 oz. of linseed oil, 1 oz. white of eggs, 2 oz. of yolk of eggs, mix the lime and oil with very gentle heat, beat the eggs well separately, and mix with the former—spread this mixture with a paint brush over the cotton, allowing each coat to dry before applying another; until they become water proof. The following are the advantages these shades possess over the glass ones

1st. The cost being hardly one-fourth.

2d. Repairs are easily and cheaply made.

3d. The light. They do not require watering: no matter how intense the heat of the sun, the plants are never struck down or burnt, faded or checked in growth, neither do they grow up long, sick, and weakly, as they do under glass; and still there is abundance of light.

4th. The heat arising entirely from below, is more equable and temperate which is a great object. The vapor rising from the manure and earth is condensed by the cool air passing over the surface of the shade, and hangs in drops upon the inside and therefore the plants do not require as frequent watering. If the frames or stretchers are made large, they should be intersected with cross-bars about a foot square to support the cloth. These articles are just the thing for bringing forward flower seeds in season for transplanting.

Lettuce should be sown as early as the ground can be prepared. Early peas should be sown as soon as possible. Now is the time to select seeds, prepare bean-poles, pea-sticks, &c., and when needed they will be in readiness.

SALT FOR CATTLE AND SHEEP.

MR. SOLON ROBINSON, of the American Agriculturist, calls in question the propriety of salting cattle and sheep in summer or winter, as is practiced by most persons who keep these animals. He has seen sheep do well on the western prairies without salt, and thinks it could be dispensed with without detriment. Unquestionably all domestic animals can subsist on their appropriate aliment without salt, just as men can live on lean meat, or bread, or beans and peas, alone; but that fact by no means proves that a little salt in the food of man and brute, is not really beneficial. All physiologists agree that both chlorine and soda are found in the digested food and blood of animals; and that chlorine aids much in the process of digestion, and soda in the purification of venous blood. Now, salt is a compound of these two elements, viz., chlorine and soda or sodium. It is true that lions subsist on fresh meat without salt, and many savages do likewise; so too, lions and savages live without clothes or houses, but is that fact sufficient to overthrow the necessity of wearing apparel and artificial shelter? Many things are possible in vegetable and animal life, which are by no means desirable or profitable. A small quantity of pure salt, taken daily into the system of man, or those of his cattle, sheep and horses, will promote digestion, and aid in purifying the blood. Buffalo, deer and wild cattle get saline water or clay when they can—instinct teaching them its use and value, as it does the value of grass.

STAGGERS IN CATTLE is caused by a change from poverty to rich feeding. It is most common in cattle turned into luxuriant pasturage in the spring, or early in summer; and those that have been kept poorly during the winter are most liable to this disease.

Symptoms — Dulness; a constant dispositson to sleep, resting the head on any convenient place, and reeling and staggering in attempting to walk.

BEES.—No. 7.

Spring Management.—The months of March and April are a critical period for bees. Many families perish from famine during these two months. Bee-keeper's should examine their hives early and often, and such as are apparently without honey, should be fed. You should remove all families liable to suffer from famine, to your cellar, if a *dry one*; if not, to any room in the house, or out-house, that can be made dark. All light must be excluded Here you must set the hives *bottom upward*. The next point is to give the food. If you have any honey in the comb, lay the pieces directly upon the combs within the hives, and as near to the bees as possible; then rap upon the sides of the hives, and the bees will ascend and remove the honey to the centers of their combs, to be consumed at their leisure. If you feed liquid honey, you should heat it enough to run freely; then lay a piece of empty comb, as nearly horizontally as may be, over or near the bees; and to do this, you may have to cut off the tips of combs in hives but partially filled, or place a strip of wood across the interior, to serve as a support of one side of the comb. When adjusted, take your warm honey in a small pitcher, and fill the cells at the upper surface. The bees will remove this honey as before mentioned. When no honey is to be had, (West India honey is as good as any,) you may make a *syrup* of sugar, by adding about a half pint of water to three pounds of sugar; then heat it till it boils. After it cools, take off the scum, and it is ready for use. Hives that are full of combs, require a portion to be cut out sufficient to insert a piece of comb horizontally, as before stated. The hives may be covered with a cloth, or a wooden cover, always giving sufficient room for the admission of air, without allowing the bees to escape. The feeding should be done at evening, since the bees will be much more quiet at this period, while removing the honey, than in the day time, even if it be a perfectly dark place where the bees are kept. They are apt to endeavor to escape when aroused in the day-time, especially if any light enter the hive. The period to remove the bees to a dark location, for the purpose of being fed, is at any time from December to April. As soon as pleasant weather approaches in April, place them where they are to stand for the season. I now refer to a northern latitude, and especially to Western New York, where we have but little warm, sunny weather in the winter season. In sections where the skies are more clear, and especially farther south, feeding may be effected, through the aid of the sun, in the supers or chambers of hives, as fully set forth in the *Bee-Keeper's Manual*. A little salt should be put in the food of bees in the spring. Don't be at all uneasy in regard to keeping your bees confined several months, when it is necessary to do so. It is better that they should be allowed to void their fœces, but it will not seriously injure them to be shut up five months. T. B. Miner.

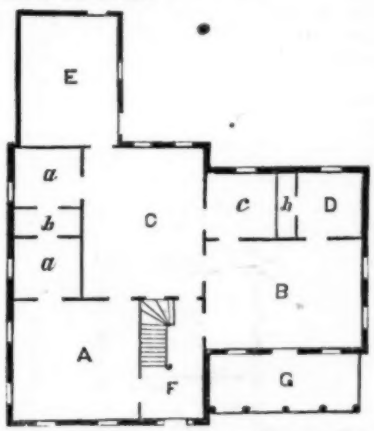
An Enquiry—*Facts vs. Theory.*—If it be as Mr. Downing states, that the "air-tight and ten-plate stoves" are the great poisoners of American health, how does it come to pass that the Germans, of Pennsylvania, who have used the "ten-plate" longer, and more generally, than any other American citizens, are the healthiest and longest lived people in the United States? Can Mr. Downing answer? S.

Country Residences.

We shall continue, during the year, to give plans of cottages and farm-houses. If none exactly suits the wants or taste of any one about to build, they will certainly aid all in forming their own plans. The one below is from a correspondent, and the cottage on the next page we take from *Downing's Country Houses.*

PLAN FOR A FARM HOUSE.

Messrs. Editors:—As you are in the habit of giving such plans to your readers, I will give you a plan of a very convenient farm house. Being a joiner myself, and working among the farmers, I have had a very good chance to learn their wants; and, as it is the poorer class of farmers that are in the most need of help for a plan to come within their purse and convenience, (for those are the most difficult houses to plan,) I will give you one of a small cheap farm house. I told one of my neighbors the other day, when he called on me to give him a plan of a house, I should charge him one dollar (and very cheap at that) for drafting for him a farm house, but if he would pay three shillings for the Farmer he should have as good a plan as I was capable of drafting, for his convenience, and the paper to boot. So he thought it much the cheapest way to obtain the plan for his house.



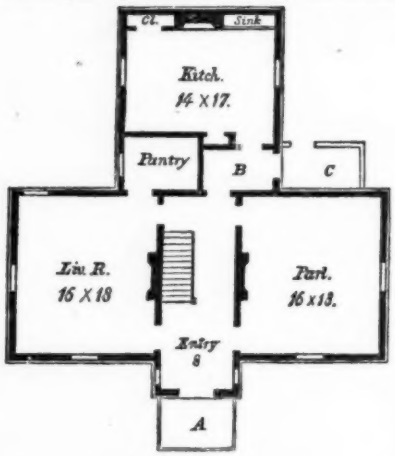
A, Parlor, 15 by 15. B, Dining room, 14 by 18. C, Kitchen, 15 by 18. D, Bed room, 8 by 8. E, Wood-house, 12 by 16. F, Hall, 8 by 15. G, Veranda, 7 by 17. *a*, *a*, Bed rooms, 7½ by 8. *b*, *b*, Closets. *c*, Pantry, 8 by 8.

Here you see a house, standing end to the road, 23 by 33 feet, 1½ stories high, and 14 foot posts; the chamber to be partitioned like the first floor, with frieze lights in the side to light the bed-rooms, and other rooms, if required. The wing on the right, 23 by 18 feet, is a dining room, or common living room for the family; with a veranda in front, and bed-room, clothes-press, and pantry in the rear. You see the pantry has two doors, to be convenient for both rooms; a wood-house in the rear, 12 by 16 feet. The large rooms all open in the hall, and being compact, makes it convenient. My estimate on the carpenter and joiner work is $354, and board $30. The cost of materials would vary in different places; in this place, the carpenter and joiner work would about equal all the rest of the expense of the house. Philip Hoag.—*Richburg, N. Y., Jan.*, 1851.

A SYMMETRICAL COTTAGE.

WHOEVER loves symmetry and the simpler kind of cottage beauty, including good proportion, tasteful forms, and chasteness of ornament, we think, cannot but like this little design — since it unites all those requisites. It is an illustration of a cottage made ornamental with very trifling expense, and without sacrificing truthfulness to that kind of tasteful simplicity which is the true touchstone of cottage beauty. This cottage is designed in the rural Gothic or English manner, but much modified, so as to adapt it to almost any site.

The light, open porch of this cottage may be omitted without injuring the design, but it gives the front an air of so much feeling and refinement, aside from its manifest utility, that we should always hope to see it adopted by those about to execute the design.



GROUND PLAN.

ACCOMMODATION. — The kitchen is on the same floor with the living-room. Many families would prefer to use the room marked "parlor" in the plan, as a bed-room, and, if so used, the cottage would be a very complete one for a small family — having living-room, bed-room, pantry, etc., on the same floor. But to others who would prefer to have no bed-room on this floor, a parlor would be looked upon as far more important.

In the plan, A is the porch, from which we enter the hall or entry, 8 feet wide — with the two best rooms, each 16 by 18 feet, on either side of it. Connected with the living-room, in its rear, is a good pantry. B is the back-entry communicating with the kitchen. C is the back-porch, which may be left open in summer and enclosed in winter, when it will serve as a place for coal and wood. On one side of the kitchen fire-place is a closet, and on the other a sink, into which, if possible, a water-pipe should be brought.

The first story of this cottage is supposed to be 10 feet, and the chamber story 5 feet on the sides, and 8 feet in the middle of the rooms. The pitch of the roof is a right angle.

As the entry, or hall, of this plan is wide, and the arrangements both simple and convenient, we think it will be difficult to build a more agreeable cottage, for the sum proposed, than the present design. — Though picturesque in its exterior, it is not so much so as to *demand* a highly rural or picturesque site, but would look equally well either in the suburbs of a town or in the midst of the country.

The chimneys in the elevation show one of the forms made in Garnkirk fire clay. These are sold by the importers (JAS. LEE & Co., New York and Boston) at from $4 to $6 each. The base of this chimney (of common brick work) should be carried up a couple of feet above the level of the ridge of the roof before the chimney-tops are set.

CONSTRUCTION. — The exterior of this cottage is vertical boarding—of planed and matched floor plank about ten inches wide. The window frames are from three to three and a half feet, inside measure — with a centre mullion and latticed sashes. The roof of the porch is nearly flat and roofed with tin, so as to form a balcony to the bed-room window over it.

The house is, of course, filled in brick on edge, set flush with the outside of the frame, and the inside walls plastered on the face of the brick.

ESTIMATE. — The cost of this cottage, with the interior neatly finished and painted in oil color, and the two principal rooms grained and varnished like oak, and their walls papered with suitable paper—all the other walls being brown walls white-washed, would be $835.

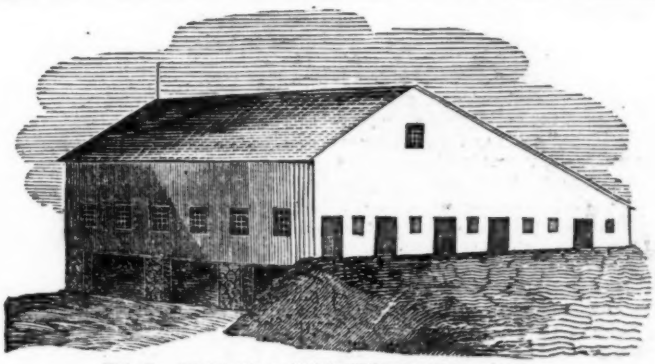


FIG. I. PLAN OF A BARN WITH MANURE-CELLAR.

BARN WITH MANURE-CELLAR.

MESSRS. EDITORS :—A few days ago I was on business at the Post Office, when the Genesee Farmer for January was handed to me, which I perused with much inquisitiveness. In the course of my perusal I saw a communication headed "*Farmers, save the wash of the barn-yard*" a subject in which I feel myself much interested. The past season I have built a new barn, with a view to prevent the leeching of manure, which among other improvements contains a manure-cellar and a cistern to receive the drainage of the manure heap. For a full description and cut, see the *American Farmer*, Vol. 1, No. 4. Although it would be an expensive plan if every farmer should build a new barn, yet, had I a Swiss or bank barn, I would tear out the stabling below and convert that place into a manure, and fit up the stabling in one of the mows ; for no one who has not the experience, can form an idea of the quality of the manure made in a manure-cellar, by mixing daily the droppings of horses, cattle, and swine, and spreading it evenly on the manure heap. EDWARD KOHLER.—*North Whitehall, Pa., Jan'y*, 1851.

The following is a description of Mr. KOHLER's barn, with drawings, &c., translated from the "*American Farmer*," an excellent agricultural magazine in German, published at Harrisburgh, Pa. :

"MR. I. M. BECK :—Enclosed I send you, as desired, a draft and description of my new barn. Fig. 1 is a view from the south-east, (vide engraving.) The barn stands at the foot of a western hill, running south. The main building is 50 feet long, 38 feet wide, and 18 feet high ; and there is a building 18 feet square attached to the northeast corner, on the north side, giving to the east side of the barn a length of 56 feet. The whole is framed of strong oak timber, weather-boarded and covered with slate ; upon the western end of it there is a lightning-rod.

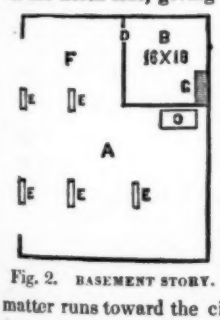


Fig. 2. BASEMENT STORY.

"Fig. 2 represents the lower or basement story. A, manure-cellar. B, cellar for vegetables. C, a cistern for collecting the liquid manure. The floor of this cellar is so laid that from all sides the liquid matter runs toward the cistern. D, door leading to the cellar for vegetables. E, E, &c., are stone pillars upon which the frame-work of the building rests. F is now used as a waggon-shed, &c. G, stairs leading up to the threshing-floor, directly opposite a door leading into the "fodder-gang" in that part in which the cattle are fed. The manure-cellar affords to cattle an agreeable protection against cold, rain, and storms, the open side of it being south and facing the barn-yard.

"Fig. 3 represents the floor of the barn. A, A, entry and "fodder-gang," [foddering passage,] commencing at the east end of the barn, running toward the threshing floor, thence along the same and through the attached building to the north side of it, where a window, not marked in the draft, throws light into this passage. B, horse-stables. C, cattle-stables. These stables are nine feet high, and can be raised by means of ventilators, shown in fig. 1. The animals stand upon a platform six inches high, by means of which a gutter or canal is formed, receiving all their droppings. D, D, &c., doors. E, threshing-floor, 12 feet high. F, F, F, F, are trap-doors through which the manure is thrown into the cellar. G, trap-door through which straw, chaff, &c., may be thrown upon the manure. H, cutting-room. I, grainery. J, grain-mow. K. barn-door.

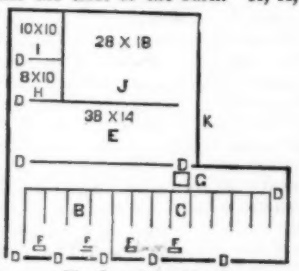


Fig. 3. BARN FLOOR.

CULTURE OF POTATOES. — *Messrs. Editors :* — I have found by experience that the best way to raise a large crop of sound potatoes, is to plant the potatoes, and as soon as the first ones begin to show the tops above ground, cover them and the whole ground with manure ; and when they are fairly above the ground, plaster them freely. The manure destroys all the weeds and grass, and when you hoe them the labor is light, and the tops soon cover the ground. The manure being on the surface, keeps the earth moist and loose ; the potatoes grow large and of the first quality, and are not likely to rot. E. W. ROBINSON.—*Farrel Place, N. Y.*, 1851.

THRESHING OATS.

MESSRS. EDITORS :—Having seen in your February number a communication signed "ARTEL," of Hornby, N. Y., containing an estimate of cost attending the threshing of oats with the ordinary large "Itenerant Threshing Machines," making the cost, including board of men and team, upwards of three and a half cents per bushel, (a pretty heavy per cent. upon their value,) and comparing the same with the cost and advantages of threshing with the flail, I beg the privilege of going a little further, first acknowledging the latter mode the better of the two described by him. The farmer's grain not always being in a condition to allow long delay, and the quantity too large to admit of the slow process, as well as the fluctuation of the market at different seasons, together with the exposure and waste from various causes, he is in most cases compelled to submit to this extravagant tax, levied on him by the "Goths and Vandals" of the surrounding country, in the form of the large *eight* and *ten* horse powers.

Having for many years devoted the greater portion of my time and attention to the wants of the agricultural public in the way of labor-saving implements and machinery, and been engaged in the manufacture and introduction of the same, I may perhaps be allowed to go a step further than "ARTEL," and see if a better mode can not be adopted, by which the farmer may be placed in a more independent position in all respects, save much time and expense, and better suit his own convenience at the same time. As the Railroad Horse-Powers, together with the small spiked cylinders now used for the threshing machines, have been so simplified as to do away the prejudice heretofore so justly felt against all endless-chain horse-powers, (on account of injuring horses,) I will compare the cost, &c., of threshing an equal amount with the R. R. machines, (viz., 600 bushels,) rating the capacity of the machines at the average amount they will do, (and which the warranty of responsible manufacturers makes a condition of sale, the purchaser being his own arbiter, after three months use and trial.)

With a two-horse power and the other parts to match ; with two horses which shall together weigh not less than two thousand pounds, on an elevation of 1½ inches to the foot, and a travel of 2½ miles per hour, either with our without harness ; and with four men, four hundred bushels of oats can be threshed per day for months together, without change or injury to horses. Taking his rate of charges, we arrive at the following result, assuming the farmer to own his own machine :

Four men 1½ days each,	$5 25
Two horses 1½ days each,	1 50
Board of four men 1½ days,	1 14
Board of two horses 1½ days,	75
Cleaning up for market with fan-mill,	1 75
	$10 39

making a fraction over one cent and seven mills per bushel, and having at the same time the advantage of doing his own work with his own farm help and team, and at such times as the market, the weather, or his own convenience is best accommodated. So much for the two horse machines in 1½ days.

As a majority of farmers pursue a mixed farming, and have a variety of grains and grasses, with a power and a machine of the improved kinds now in use, he can do all his threshing and secure his own grass and clover seed, if not a surplus for market. The power will be found of sufficient use, in sawing wood and for various mechanical purposes, to more than pay the interest on the investment and ordinary repairs from wear, &c. Should the farmer prefer to thresh his oats day by, at the rate of twenty or thirty bushels, with his monthly laborer he can do so with the assistance of a boy in from one to one and a half hours, with but one horse, leaving the balance of the day to be devoted to making and repairing implements and attending to the thousand and one wants always about the farm. buildings, &c., &c. When the farm is small, and the quantity of grain small, a saving of some $25 to $30 is made by the purchaser in buying a one instead of a two-horse power, with which about one-half the amount can be done as with the double power when each are worked up to their full capabilities. H. L. E.—*Albany, N. Y.*, 1851.

STOCK IN CAYUGA COUNTY.—*Messrs. Editors :* It may be of interest to the agricultural portion of your readers, to learn that an addition to the superior stock of short horn cattle in Cayuga county has lately been made, in the purchase by ELISHA W. SHELDON, Esq., of Sennett, of Mr. GEO. VAIL, of Troy.

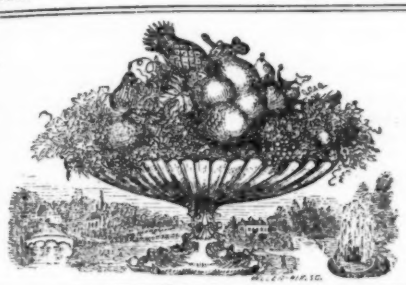
Mr. SHELDON has obtained two thorough bred animals—"Kirkleavington," a bull calf, is roan, out of Mr. VAILS imported bull "Duke of Wellington ;" and "Lucilla 3d," a red and white heifer, between one and two years old, out of "Lucilla 2d," and sired by LEWIS F. ALLEN'S bull "Don." For extended pedigrees, see American Herd Book.

At the late Fair of the American Institute, "Kirkleavington" and "Lucilla 3d" were each awarded the first premiums in their respective classes, and they are indeed a choice selection from Mr. VAIL'S very excellent herd, possessing, as they do, pedigree and merit inferior to none. With such cattle, the town of Sennett will fully maintain her place in the premium lists (both County and State,) of former years, for which the enterprising farmers of that town deserve much credit. A. B.

EFFECTS OF LIME, GUANO, AND PLASTER.—Some fifteen years ago, I was among the first who introduced lime as a fertilizer on our farms, since which time almost every farmer is making efforts to procure it, although at considerable cost. We have to haul our lime from twelve to fifteen miles, at a cost of 15 cents per bushel. Within the two last years I have been experimenting with Peruvian guano ; and so far as it relates to my wheat crop, it has had the happiest effect. Where I guanoed, the wheat was one-third better than where I limed at the rate of fifty bushels per acre, accompanied with a good supply of barn-yard manure. Alike in all other particulars.

Last fall I put a very poor field to wheat, on part of which I sowed a mixture of guano and plaster, and on another part added common salt, and on the balance of the field I sowed only the salt, at the rate of six bushels per acre. The parts having the guano, plaster, and salt, have the best top at this time. ELIDA JOHN.—*Bear Gap, Pa., 1st mo., 23d*, 1851.

MOULDY BEANS may be restored and made fit for use, if not very bad, by rinsing well in hot water, and carefully drying. Mouldy corn or peas may be treated in the same way.



Horticultural Department.

EDITED BY P. BARRY.

A FEW HINTS ON PRUNING AND MANAGING ORCHARDS.

THERE is so much said about our clear and dry atmosphere, and bright sun, obviating the necessity of pruning; and so much said, too, about pruning being an "unnatural" operation, that a great many people have actually settled down in the belief that on the whole it is as well to let trees grow in their own natural way. The orchards of Western New York are not much worse managed than those of other sections; in some respects, perhaps, they are better; but we can safely say that there is not one in 20 of them but may be doubled in value in one year, by a judicious pruning of the branches, and a dressing of compost at the roots. Our young apple orchards produce fruit of the finest quality—large, smooth, brightly colored, and beautiful; and it has not to be hawked about the streets to find a purchaser. In all states of the market there are buyers enough, and at high prices, for such fine specimens; $1 per bushel, $3 and even $4 per barrel, are ordinary prices for extra fine lots of Northern Spy, Red Canadian, Spitzenburgh, Swaar, &c., while the average market price of these is about 50c. per bushel, or $1,50 to $2 per barrel.

The cause of the superiority of the fruit from a young tree, is that, the head has not yet become filled up with ad ense mass of small twigs, is open, the sun reaches all its parts, the wood is stout and mature, the foliage is large and healthy, the soil too is unexhausted, the roots spreading rapidly in consequence of the vigorous condition of the head, find abundant nutriment; and the result is large, bright, and beautiful fruit. As the trees become old, being left unpruned, the heads gradually fill up with a profusion of weak twiggy shoots, growth among the branches becomes less vigorous, and consequently the roots push feebly too. An immense number of fruit buds are produced; indeed, every part of the head becomes crowded with them; consequently the fruit is small, three-fourths of it is shut out from the sun, or rather the sun is shut out from it, and therefore it has neither flavor nor color. Hence we frequently see Spitzenburghs, Northern Spys, Baldwins, &c., that ought to be as red as blood, present a blanched and sickly appearance, that completely disguises them; and no man who knows what a good apple is, or ought to be, will buy them to put upon his table. We have a barrel of Spitzenburghs and Northern Spys in our cellar at this moment, and the two put together are not worth a dollar. They were sent us too by a gentleman who ought to have known better; but he probably had not seen them. Occasionally they have a red spot or streak on them; but as a general thing, they have a pale greenish hue, and are totally void of richness or flavor, and they keep badly; their juice is watery and immature. They explain the cause themselves—they were grown on the lower side of branches, or in the interior of trees, where they had no sun.

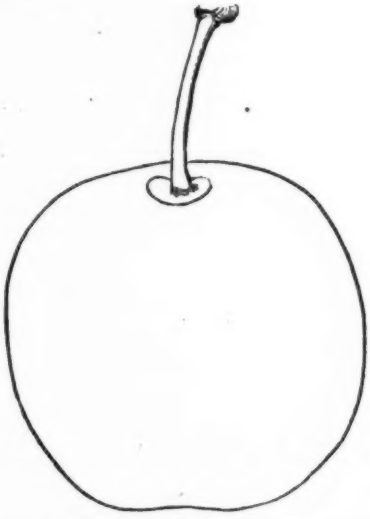
When the public, we mean the consumers of fruit, in our towns and villages become more familiar with the peculiar characters and qualities of fruit, it will be more difficult to dispose of these green, insipid productions; and we would now caution every one against buying such things as pea-green Northern Spys, Baldwins, or Spitzenburghs, because they are destitute of flavor, and will not keep. Yellow apples suffer just as much from shade, but do not show it so strongly. They have a cold, bluish tinge, that indicate their imperfect character, and their juice is like water. Those grown in a sunny aspect have a deep warm color, and the juice sparkles like wine—a peck of these is worth a bushel of the others.

We would have cultivators and orchadists, think of their own interests, and turn to, now, and thin out with the saw and the pruning knife the weak superfluous branches that fill up the spaces that ought to exist between the bearing branches, to admit the sun to all the fruit. Do it freely but carefully. An active man, who knows how to handle a saw and a knife, can soon go through an orchard of considerable extent. In connection with the pruning, a liberal dressing of compost should be given; stable manure well decomposed, ashes, and muck, well mixed together, will do very well; lime, too, is generally good; and in light, sandy soils, clay may be added: but in all cases the well rotted stable manure should be the basis. Peach trees should be pruned, but not till the hard frosts are over and the buds are swelling slightly, so that fruit buds will be easily discerned.—We are glad to find that this subject begins to receive more attention. Some of the best orchadists about our city begin to prune regularly, but not one of them do it thoroughly. They allow their trees to bear twice or three times as many fruit as can be matured with safety to the tree, and they let the lower parts become gradually denuded; they confine their pruning too much to the outside of the tree; there only they remove the points of the shoots: but this is not the way to do it well. The pruner should have a pair of pruning shears, with which he could cut faster than a person can count; and taking one branch of the tree after another, shorten all last year's shoots on it so much that half the fruit buds will be taken away and new shoots for next season's bearing produced towards the base of the present shoots, to keep up a supply of young wood on all parts. This is the only way in which a peach tree can be maintained healthy and fruitful. Every branch, large and small, should be furnished with bearing wood on all its parts. Some people who have never given such attention to their trees, will look upon this as a prodigious labor altogether too great to be undertaken; but we only ask them to try it on one tree, and note the results. It is no excuse for a man to say, "it takes us so long, because we are not accustomed." Those who are engaged in peach orcharding should learn to handle their knife and shears, or hire some one to do it; for they

cannot expect to get along well without using them, and that expeditiously and well. The time is coming when there will be more competition than there has been in the fruit market, and those who have pursued the most thorough system of culture, by which they are enabled to present the largest and most perfect fruit, will monopolize all the profitable part of the business. The negligent, half-way cultivator, will have to be contented with the crumbs.

RARE AND FINE FRUITS.

WE give below, from the *Horticulturist*, figures and descriptions of two new or rare fruits that strike us as being likely to prove valuable. We know nothing of them personally, but the character given of them by Mr. DOWNING presents them under a very flattering aspect. A short time ago C. M. HOVEY, Esq., of Boston, informed us that a cherry resembling this Great Bigarreau, and very probably the same, had been imported to that vicinity from France, without a name, and that a name had been given it, which we do not now remember. We hope this point will be cleared up.



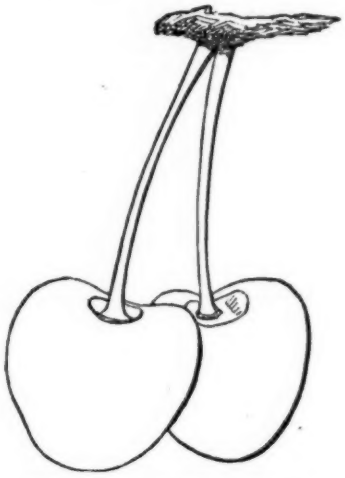
THE GENERAL HAND PLUM.

"We think this may be called the largest yellow plum known—certainly the largest native variety. Its history is obscure, but we believe it was originated somewhere in Maryland. The first trees were, we believe, sent out from the nursery of Messrs. SINCLAIR, of Baltimore, a number of years ago, but the variety is still very little known to cultivators.

"We first received specimens of it from Mr. ELI PARRY, of Lancaster, Pa., and noticed them very briefly in the Hort. for 1848. The only accurate account published of this fruit, by any reliable practical cultivator, is contained in a note from Mr. A. FAHNESTOCK, of Lancaster, Ohio, in the Horticulturist, vol. III, p. 332, in which he says, 'from the fruiting of this tree, for *eight years past*, and general observation —(though the location is a bad one,) I am induced to call it one of the most valuable plums, on account of its never having failed to bear a full crop, and its maturing its fruit perfectly. I admit that it is not so finely flavored as the Washington'.

Our opinion of this plum is, that it is simply a *good* fruit, not of high flavor, but so large, handsome and productive, that it will become a favorite for market cultivation.

Fruit very large, roundish oval, regularly formed, with an obscure suture running half round, and terminating at the top in a small scarred point—the remains of the old style. Skin smooth, deep golden yellow, slightly marbled with greenish yellow. Stalk unusually long, moderately stout, set in a very small shallow cavity—the whole of that end of the fruit being rather flattened. Flesh pale yellow, moderately juicy, sweet and good, though not of high flavor. It parts freely from the stone, which is ovate, light colored, and small for so large a fruit. Branches nearly smooth, leaves large and long, with long foot-stalks. Ripens the first week in Sept.



THE GREAT BIGARREAU CHERRY.

This, unquestionably the largest and most beautiful of all cherries, appears to be scarcely at all known to pomologists. A foreign variety, perhaps more distinct than any other large cherry in its foliage, growth, and in the size, excellence, and color of its fruit,—which is equal to the Black Tartarian in flavor, and surpasses it in beauty and productiveness, certainly should not be unknown to American pomologists. And yet we cannot identify it with anything known or described in the English, French or American books on fruits.

The only tree known to us of the Great Bigarreau, (a name we have adopted temporarily, until the real name is discovered,) is one of pretty large size, upon the premises of Mr. LINDLEY M. FERRIS, nurseryman, Coldenham, Orange county, N. Y. Mr. FERRIS first astonished us by bringing branches of this tree in full, laden with superb fruit, 2 years ago—supposing we should be able to identify it with some foreign variety, we made a drawing and description of it at the time, and waited to make further research on the subject. So far, our labor for two seasons to identify it with any other sort, has been in vain, and we now publish the description, to introduce what we think the most magnificent of cherries, to the notice of our fruit growers, and partly with the hope that some of our pomological readers in France may be able to recognise and give us its true name.

The Colden estate, which Mr. FERRIS now holds, has some valuable sorts of foreign fruits upon it; and among a number of trees imported from France about 20 years ago, were this and several other cherries—including the Belle de Choisy. No labels or invoices having been left, all record of the sorts was lost. But the trees have grown finely, and this one in particular has formed a large and luxuriant head, and for several years has been annually loaded with large crops of fruit.

As a young tree, the Great Bigarreau is remarkable for its upright growth, with very few side branches. The foliage is also very distinct from that of either the Tartarian or the light colored Bigarreaus, by being unusually *long* as well as large—much larger indeed, than the leaf of any other cherry known to us.

The tree is usually a great bearer, producing heavier crops than the Tartarian, and nothing can well be more beautiful than its branches laden with clusters of very large cherries, much ruddier and lighter in color than the fruit of the Black Tartarian—something in color between red and black.

The following is its pomological character. Fruit very large—considerably larger than the Black Tartarian, which it most nearly resembles in flavor, texture of the flesh and general appearance, though it differs in color, size and form—the form being an oblong heart-shape—*high shouldered*, and not irregular in outline like the Tartarian. Skin beautiful deep red, becoming nearly black at maturity. Stalk thick, rather short, swollen at both ends, and set in a deep cavity. Flesh, in texture, juiciness and flavor, very much like and fully equal to the Black Tartarian. Tree very luxuriant, foliage very long and large. Ripens with the Tartarian, or a few days later.

We have only to add that when we first saw this cherry in bearing, we supposed it would prove identical with the Great Bigarreau de Mezel, a French cherry described in a previous vol. of this Journal. But a comparison of the foliage and growth of the young trees of both vatieties in the same soil, the past season, has proved that the two are quite distinct. We can only say, therefore, that the Great Bigarreau is a very distinct and a very superb foreign cherry, which succeeds admirably here, and must become a great favorite in fruit gardens

ANSWERS TO CORRESPONDENTS

Mr. Editor —Is the Northern Spy affected by the bitter-rot as has been reported in the west? (1)

How does the Red Canada compare in value as a tree and fruit with the Esopus Spitzenburgh—where the former flourishes, is it not a profitable variety? (2)

What is the best Professional Work on Trees and Plants? I have several, but they are abridged so very meagre as to be quite unsatisfactory. (3)

Will you please give us the most approved method of rearing Evergreens from the seed—or more especially the Red Cedar? The cut worm proves exceedingly troublesome here with any such choice feeble seedlings. (4) F. K. P.

(1) Not to our knowledge; we have never heard a syllable to that effect among our cultivators, or others who use the fruit here.

(2) To our taste the *Red Canada*, as it grows here, has no superior, except the Melon. It is better than the Spitzenburgh, and the trees about alike—neither vigorous.

(3) *Loudon's Arboretum Britanicum*—four large volumes of text and four of exquisite engravings. It costs about $40. You can get it in New York, of John Wiley, G. P. Putnam, or any importer of foreign works.

(4) This is a problem we are trying to work out. The great difficulty is our *hot sun*, that burns off the young plants as fast as they appear. We have no experience with the cut-worm. The best method of rearing evergreens from seeds that we know of at present, is to sow them in boxes of light earth—say about equal parts of fine leaf mold from the woods, common bank sand, and good friable loam, free from insects. Mix all these thoroughly. Sow the seeds broadcast in the boxes, cover lightly, place the boxes on the north side of the wall or fence, and water carefully. By being in boxes you will be better able to winter them carefully. After two years' growth, they may be bedded out into a nice, light, north border, quite close. Red cedar does not generally come up the first season.

Pear Seeds.—(P. R., Trivoli, Peoria Co., Illinois.) We do not know of pear seeds for sale at present. Mr. Isaac Hildreth, of Big Stream Point, N. Y., collected and furnished many bushels of clean seed last autumn, at the rate, we believe, of $40 or $50 per bushel. You had better apply to him another season.

Grafting the Currant and Gooseberry.—(J. W. G.) This can be done; but as both are so easily propagated from cuttings, grafting is seldom practised. Both plants vegetate very early in the spring, and the scions should therefore be collected in winter, and grafting be performed rather in advance of the grafting season—say early in March.

Twenty best Apples for General Cultivation in Connecticut.—*Early*—American Summer Pearmain, Red Astracan, Early Harvest, Sweet Bough, Early Strawberry or Summer Rose. *Autumn*—Golden Sweeting, Gravenstein, Fall Pippin, Hawthorndean, Dyer or Pomme Royal. *Winter*—Baldwin, Peck's Pleasent, Rhode Island Greening, Newtown Pippin, Seek-no-farther, Talman's Sweeting, Swaar, Northern Spy, Roxbury Russet, Ladies' Sweet.

Best Twenty Pears.—Bloodgood, Bartlett, Dearborn's Seedling, Madelaine, Summer Francreal, Tyson, Buffum, Beurre Bosc, Beurre Diel, Beurre Golden, Belle Lucrative, Dix, Flemish Beauty, Louise Bonne de Jersey, (White Doyenne, if it succeeds there,) Vicar of Winkfield, Glout Morceau, Winter Nelis, Lawrence, and Beurre d' Arremberg.

Shipping Trees.—(J. D., Snowden Township, Penn.) There is no difficulty in sending trees from this place to Pittsburg.

Hardy Cherries and Stocks.—(V. C. M., Wisconsin.) The May Duke, Carnation, Belle Magnifique, Belle de Choisey, English Morello, and most of these classes, are quite hardy. The Mahaleb is hardy and succeeds in many places where the Mazzard fails. Hardy seedlings may also be produced from seeds of the common Morello, if you can get them.

The Chili Pine.—(T. W. Painter.) The dingy hue it assumes in winter is not permanent; with the return of the growing season it resumes its green color; the hardy native cedars turn brown in the winter. Plants can be obtained here.

Northern Spy Apple.—(J. A. P.) Please refer to the November number of the Farmer for some very conclusive facts in regard to the points referred to. Your other requests will be attended to.

A Disease of the Cherry Tree.—(E. B. B.) Such a malady as you describe—the effusion of gum on the young shoots—is entirely unknown to us, and may be produced by some insect. Are your trees on *dry* ground? If not, the cause may be there. Cherry trees will soon canker and die off on a retentive or ill-drained soil.

When to Transplant Evergreens.—(N. W. V., Damascus, Pa.) Any time in the month of April. May will do very well; but dry weather is more to be apprehended then. Take up a ball of earth about the roots, if possible.

How to Repel the Locust Borer.—*Mr. Editor:*—I have a beautiful locust tree, twenty feet in height, which I raised from seed sown by myself in April, 1838. In the summer of 1847, the trunk, to the height of 5 feet, was attacked by the Borer, which made sad destruction with my tree. I washed the bark with ley, soap suds, lime water, brine, &c., without effect. In 1848 my tree appeared to be dying. I then took a knitting needle and inserted into the holes made in the bark by the Borer, a quantity of smoking tobacco. I repeated the same in the spring of 1849 and 1850; at this time the bark has in many places nearly healed up, and the tree has assumed a healthy appearance, bearing last summer several racemes of beautiful flowers. Perhaps some persons who value locust trees as I do mine, may try tobacco with the same success as I have done. A. F. A.

A Horticultural Hall in Cincinnati.—A. H. Ernst, Esq., President of the Horticultural Society of Cincinnati, has addressed Mr. Longworth a public letter on the subject of the erection of a Hall for this Society's exhibitions and kindred purposes. From the horticultural zeal of Mr. Longworth, his ample means and liberality, we have no doubt whatever but that he will give substantial and efficient aid to the enterprise. And the citizens of Cincinnati, more especially her numerous and wealthy amatuer horticulturists, will not fail to perform their part well. *The building must go up;* it will be an honor to the city, and particularly to those who participate in its erection.

Revival of the Maryland Horticultural Society.—We are glad to see by the *Am. Farmer*, that this old Society has been re-organized under favorable auspices. We notice among the names of the officers most of the gardeners and nurserymen, and several zealous and wealthy amateur horticulturists of Baltimore. They propose to hold weekly exhibitions, to which members and their families are admitted, and in June next their first grand public Exhibition is to be held.

MARKET GARDENING AROUND LONDON.

GENERAL REMARKS TOUCHING ROTATION OF CROPS, &c.—If we take a five-acre piece of ground, say in November, we shall find it full of cabbages, which being planted out about the 25th of October, will be strong healthy plants. The moment these are off, the land is again trenched and cropped with early celery, in well dunged trenches six feet apart, with two or three rows of lettuces or coleworts in the middle; for market gardeners do not mould up celery until it is very large, (often eighteen inches high,) so there is plenty of time for a crop of cabbages, coleworts, or lettuces, to come to maturity. When the celery is removed, the ground is cropped with winter greens, and again cleared off; for nothing pays so well as the London greens or young unhearted cabbages. In November Mr. FITCH, of Fulham, has often upwards of twenty acres of these, besides twenty acres of cabbages; every hole and corner under trees, and all spare places being full. When the five-acred piece is cleared of coleworts, say by the first of March, it is again dunged and trenched and sown with onions, and very often lettuces are planted in the beds as well as in the alleys. When the onions are off, the ground is trenched and planted with cabbages or coleworts, &c.; next spring a crop of cauliflowers, gherkin cucumbers, French beans, or scarlet runners, is taken off; but the grand point in the course of rotation, is to be continually sowing, and whatever plants are ready when the ground is empty to plant these. The land can well sustain so much cropping on account of the heavy dungings, trenchings, and hoeings which it receives. If you ask a market gardener what is to succeed this or that crop, the answer is, "Don't know, it depends upon what is ready for planting." Continued trenching two spades deep for any crop seems expensive; but a strong Irish laborer will turn over from twelve to fourteen rods a day, with comparative ease; and I may here state that if it were not for the Irish laborer, the prices of vegetables would be much higher. Market gardeners know that after an active crop the top soil for several inches deep is entirely exhausted, and hence the reason for continual trenching, in order to bring up the top soil that but a few months before had been turned down, with a large proportion of dung, to enrich it and fit it for active use along with the half decayed manure.

Market gardening is well conducted about London, and if young gardeners were to spend only one year with such men as Messrs. FITCH, of Fulham, it would teach them a lesson which would amply repay a twelvemonth's hard labor. They would there be taught how to grow digestible vegetables, and not those stunted blue cabbages and other things that are, in too many cases, huddled up in walled-in gardens. I am almost certain that the day will arrive when the latter will be converted into forcing grounds and when vegetables will be grown in the open fields, which are their proper places. If a farmer were to send his son to be a laborer in a market garden for a year or two, the value of such a school to such a man in after life would be great to himself, his landlord, and to the country at large. The expensive system of a market garden would not be required in a farm; it could not be maintained; but it would show him that one acre cultivated by the spade is equal to five by the plow. We know that some market gardeners use the plow; but how does it pay? Their things are always the last sold, and that for the most part to the hawker, whose name will tell the price obtained. It is, however, necessary to have a scarifier plow in all market gardens, in order to tear up the earth after the carts in wet weather.

Some years ago I took the late Mr. SMITH, of Deanston, over Messrs. FITCH's grounds. Till then he had no knowledge of the enormous expenses of keeping a large garden. "I have not seen," said he, "on the whole 150 acres, a weed; all the ground exhibits a fine level surface; every inch is cropped; all the paths regular; the cart-roads in good order; the hedges of the boundaries very dwarf; no ditches, and all the large plantations of apples, pears, and plums, amounting to fifty acres, with every young shoot made during the summer, pruned down to a couple or three buds from last year's wood." Pruned after the manner of currant bushes, they look well, and bear enormous crops. The ground under the tree is all cropped with rhubarb, currants, gooseberries; and during the winter with coleworts and cabbages. I have seen eight acres of cabbages in seed beds, after the rest are all picked out for spring cabbages. Every spare piece of ground is filled; when the asparagus haulm is cut down, the ground is forked over, and all planted with coleworts, alleys and all; and when the rhubarb leaves die down, this ground is also filled: so that altogether, besides the other crops, there must be several hundred thousand heads of greens for winter market. All liquid manure from dunghills is collected into a large tank; this is conveyed to and distributed over the ground before digging; but the great objection to the use of sewage water after the crop is in, is that it fills up the pores of the earth, cements the mold, and prevents heat and air from acting on the roots.

Some market gardeners keep large herds of pigs, which live night and day among the hot dung, and subsist upon the corn that they pick out of the straw and dung, as well as on green food. Mr. FITCH keeps twelve horses, whose whole employment is to cart goods to the various markets, bring home dung, and convey it to vacant pieces of ground, which occur every week. The carts and wagons in use in market gardens have generally broad wheels. The wagons are very large, and the carts will hold as much as a Suffolk wagon. The laborers employed by Messrs. FITCH on 150 acres, amount to about 70 during winter, and in summer to about 150. The rent per acre is from 9*l.* to 10*l.*, the tithes being from 10*s.* to 12*s.* per acre. Men's wages are 2*s.* per day; women, from 1*s.* to 1*s.* 6*d.* Some idea of the amount of labor in small matters will be conceived, when I state that the whole of the frames, amounting to 1000 lights, are all painted and repaired every autumn. The whole of the hand-lights, 4000 in number, are also repaired; and every description of vegetable is washed before it is sent to market. When men are at piece-work, they receive 2½*d.* per rod, for trenching two spades deep; thus an acre highly manured, using cart-loads instead of barrowfuls, and trenching with spade, instead of shallow digging, or what is worse, using a plow, pays just in proportion to the way in which it is treated.—*J. Cuthill, in London Gardeners' Chronicle.*

☞ Will some of our correspondents favor us with a description of a first rate *Fruit Market Wagon*, with cost, &c.?

Ladies' Department.

THE SEASON OF FLOWERS.

The storms and frosts of another season are almost at an end. Old Winter, with his stern countenance and whitened locks is retreating before the smiling face of Spring. Soon her glad and welcome song will be heard—

"I come, I come! ye have called me long,
I come o'er the mountains with light and song!
Ye may trace my steps o'er the wakening earth,
By the winds which tell of the violet's birth,
By the primrose-stars in the shadowy grass,
By the green leaves, opening as I pass."

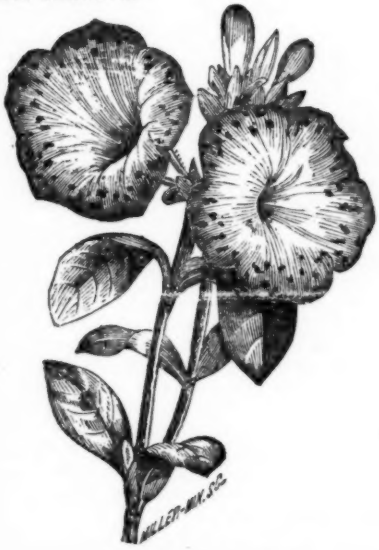
Her arrival is hailed by singing birds and smiling flowers. All love Spring and flowers. The child delights to gambol on the green and stops to admire and pluck the daisy and the dandelion. The youth loves to present to his idol these beautiful emblems of innocence and loveliness. And what more fitting—

"They were born to blush in her shining hair."

Those who have felt a sad pleasure in adorning the dearly loved and early dead with these mementoes of beauty and frailty can appreciate the words of Mrs. Hemans:

"Bring flowers, pale flowers, o'er the bier to shed,
A crown for the brow of the early dead!
For this through its leaves hath the white rose burst,
For this in the woods was the violet nursed!
Though they smile in vain for what once was ours,
They are love's last gift—bring ye flowers, pale flowers."

A little knowledge and skill is necessary in the cultivation of flowers, and many from the lack of this knowledge find the results of their efforts rather unsatisfactory, and become discouraged. Some with little time attempt to cultivate flowers that require much care, consequently their flowers fail, when if a different selection had been made their labors would have been well rewarded. We shall devote this department during the spring to descriptions of flowers and their cultivation.



PETUNIA FUNCTATA.

The Petunias are trailing or spreading p ants of almost every variety of color, from white to purple. When a number are planted together in a bed, they intermingle and form masses of great beauty, and no dry weather injures them. They keep in blossom till they are destroyed by frost. Plants may be procured at the green-houses, or may be raised from seed. The Petunia flowers the first year from seed, but fine varieties are propagated by cuttings, as the seed will not produce flowers similar to the parent.

DWARF LUPIN.

The Dwarf Lupin is another fine flower. It bears leaves cut so as to somewhat resemble expanded fingers. It is about a foot in height, and bears long spikes of blue flowers. The seed shoud be planted where the flowers are to remain.

Phlox Drummondi is a pretty dwarf annual that remains in blossom every day the whole season, and we know of no annual that makes a more brilliant appearance when planted thickly in a bed. They are of all shades of pink and purple.

Portulacca is a very showy succulent spreading annual that loves the hottest and dryest weather. They grow almost as readily as weeds. There are four varieties, scarlet, pink, yellow and white.

Ten-Week Stocks were our favorites from childhood. Easily cultivated, coming rapidly to maturity, free and almost constant bloomers; of every shade of color, from white to the darkest and richest purple; they are entitled to a place in every collection of flowers.

These all blossom the same season they are planted, and with only ordinary care. Desiring to encourage a taste for the cultivation of flowers among our fair readers, which does so much to make home pleasant, we will furnish any who may apply in season, with a small collection of seeds that with a little care will make their gardens "blossom as the rose," till Winter again with his icy hand suspends all vegetable life.

Youths' Department.

FOREST TREES.

There are few objects in the vegetable world really more interesting and beautiful than the noble forest tree. The Elm, with its graceful, drooping branches, is one of the most elegant of forest trees.

THE BEECH TREE,

as may be seen by the engraving above, is truly a fine tree, and were it not so common its noble appearance would be more generally appreciated. The Oak has always been held as the emblem of majesty and strength. It is one of the most magnificent, as it is one ef the longest-lived of the forest tribes, and its timber is valuable for its strength and durability. A variety called the *Live Oak*, an evergreen which grows at the south, is esteemed the most durable timber for ship-building.

Have Courage to discharge a debt while you have the money—to do without that which you do not need—to speak your mind when it is necessary, and hold your tongue when it is prudent you should do so — to speak to a friend in a seedy coat, even though you are in company with one richly attired —to own you are poor, and thus disarm poverty of its sharpest sting—to make a will and a just one—to "cut" the most agreeable acquaintance you have, when you are convinced that he lacks principle. "A friend should bear with a friend's infirmities, but not with his vices"—to show your respect for honesty, in whatever guise it appears, and your contempt for dishonesty and duplicity, by whomsoever exhibited—to wear your old clothes until you can pay for new ones—to obey your conscienc at the risk of being ridiculed by men — to wear thick boots in the winter, and in every prefer comfort and propriety to fashion, in all things.

How to Make a Fortune.—Take earnestly hold of life, as capaciated for, and destined to a high and noble purpose. Study closely the mind's bent for a labor or profession. Adopt it early, and pursue it steadily, never looking back to the turned furrow, but forward to the new ground, that ever remains to be broken. Means and ways are abundant to every man's success, if will and action are rightly adapted to them. Our rich men, and our great men, have carved their paths to fortune and fame by this eternal practice—a principle that cannot fail to reward its votary, if it be resolutely pursued. To sigh or repine over lack of inheritance, is unmanly. Every man should strive to be a creator instead of inheritor. He should bequeath instead of borrow. The human race, in this respect, want dignity and discipline. It prefers to wield the sword of valorous forefathers, to forging its own weapons. This is a mean and ignoble spirit. Let every man be conscious of the God in him, and the providence over him, and fight his own battles with his own good lance. Let him feel that it is better to earn a crust, than to inherit coffers of gold. This spirit of self-nobility, once learned, and every man will discover within himself, under God, the elements and capacities of wealth. He will be rich, inestimably rich, in self-resources, and can lift his face proudly to meet the noblest among men.—*N. Y. Sun.*

The Young Man's "I Cannot."—You cannot! yes you can sir; everybody can, and you amongst the rest. That's a fine way to talk at this time of day. You are young, your limbs are strong, your energies are all laying fresh in the chambers of your nature like the stores of a ship just launched for the voyage of life; all the world is before you; there is little of it behind you, and that you have skipped and played roll hoop over. Yes, young man you *can*, so never let that declaration of cowardice and weakness "I cannot" pass your lips. I do not qualify the infinitive of the verb active that describes your capacity. You can "do anything that has been done, may be done, or should be done," either in the world of physics, morals, or metaphysics. You can rivet a bolt, tear up a furrow, overturn an empire of falsehood, or produce a new idea. God grants you amongst the abundance of his beneficient possibilities one of those humanizing faculties; and you can if you will, make your one faculty, however apparently humble, a blessing to yourself and to humanity.

Discontent.—Discontent is a sin that is its own punishment, and makes men torment themselves: it makes the spirit sad — the body sick — and all the enjoyments sour; it arises not from the condition, but the mind. Paul was contented in prison;—Ahab was discontented in a palace; he had all the delights of Canaan, that pleasant land, the wealth of a kingdom, the pleasure of a court, the honors and powers of a throne; yet all this avails him nothing without Naboth's vineyard. Inordinate desire exposes men to continual vexations, and being disposed to fret, they will always find something to fret about.—*Matthew Henry.*

Want of a Pursuit.—A man without predominant inclination is not likely to be either useful or happy. He who is everything is nothing.

Editor's Table.

PENNSYLVANIA STATE AGRICULTURAL SOCIETY.—A State Agricultural Society has been recently established in Pennsylvania. We believe the farmers of Pennsylvania are waking up to their true interests, and we anticipate much pleasure in meeting the intelligent yeomanry of Pennsylvania at the first Annual Fair.

SALE OF THOROUGH BRED SHORT HORN STOCK.—MR. VAIL OF TROY, so well known as an importer and breeder of fine cattle, intends to sell at public auction a part of his fine herd of SHORT HORNS, on the 26th of June next. We shall publish Mr. V.'s advertisement with particulars in the next number.

WE have received, and shall give in our next, the list of premiums for the next State Fair, to be held at Rochester, September 16, 17, 18 and 19th of the present year.

ANSWERS TO CORRESPONDENTS.

MESSRS. EDITORS:—For one, I have determined, during our long winter evenings to pursue such a course of reading as shall enable me to practice our noble art understandingly.

My object in addressing you, is to enquire what books I shall procure to obtain a good knowledge of Scientific Agriculture, without the aid of a teacher. If you should publish in the Farmer a list of such books as would comprise a proper course of agricultural studies, I presume you would confer a favor on many others of your readers as well as me. P. C. REYNOLDS.—*Manchester, N. Y. February*, 1851.

A knowledge of Chemistry and Geology is of great service to the cultivators of the soil. This can be obtained by any young man from the books used in the schools without the aid of a teacher. Silliman's School Chemistry is perhaps the best on this subject. Sufficient knowledge may be gained by study and care in a short time. On Chemistry, as applied to Agriculture, we would recommend *Johnston's Catechism* of Agricultural Chemistry and Geology, and Norton's Elements of Scientific Agriculture. These are small books, costing together but 75 cents, and containing less than 300 pages. As soon as these are mastered, the young man will have more knowledge of the philosophy of Agriculture, than nine out of ten of the farmers in the world, and be prepared to understand Johnston's *Agricultural Chemistry*, and *Boussingault's Rural Economy* These two works will cost $1,25 each, and will furnish matter for profitable study during a leisure moment for many years, and will be worth more than their cost as books of reference, till the eyes of our young friend grow dim with age.

J. P., *Pomfret.*—We should think *Emery's Corn Planter*, would answer your purpose well. It can be procured at Albany, Rochester, or at any place where a general assortment of agricultural tools are kept. Price $15.

J P J., *Winfield, Her. Co., N. Y.*—The State Transactions are distributed by the State to the County Agricultural Societies, and by them distibuted, as premiums, &c. Perhaps the County Societies do not in all cases make good use of these volumes, but the farmers are themselves responsible. Every farmer is responsible for the character and effic ency of his county Society. The Transactions are sold at about $1.25, which is not half the trade price of such a book, and can be had in Albany or Rochester.

R. W. L., *Elgin. N. Y.*—Buckthorn plants are sold at the nurseries at from $8 to $10 per 1000.

N. E., *East Liberty, Ind.*—Sub-soil Plows cost full rigged, $15.

To Officers and Soldiers of the Revolution, their Widows and Heirs.

FOUND, about the 1st of January, 1851, a large quantity of the old original records of the services of several thousand *Officers*, (in the Commissary and Quarter-Master's Department,) *Surgeons, Artificers, Wagon Conductors, Wagoners, Teamsters, Carpenters, Blacksmiths, Boat Builders, Fatiguemen, &c., &c.*, in the war of the Revolution. These records have been preserved by descendants of Officers, and are admitted as authentic in establishing claims against the Government. Officers, soldiers, their widows, or heirs, who have omitted to assert their claims, or failed to obtain their just dues, when application has been made, for want of evidence or assistance in prosecuting their claims, are informed that the subscriber having been engaged for nearly ten years past in prosecuting claims for Pensions, Bounty Lands, &c., collecting documents and statistics relating to the Revolution, he is prepared to aid, promptly and vigorously, all persons who require the assistance of an agent or attorney in prosecuting claims before Congress, or any of the departments at Washington.

Persons, or the widows of such as served in the capacity of either class above named, *who have been pensioned*, will find it to their interest to send a statement of facts to the subscriber, as but few of those received what was justly their due.

Letters of inquiry or application should be addressed to the subscriber, *post-paid*, at Washington City, D. C.

February, 1851. WILLIS G. WADE.

Fruit Scions for 1851.

THE subscriber will furnish Scions of the justly celebrated Fruit of Western New York, of the different varieties mentioned below.

Northern Spy,	*Wagener,*
Norton's Melon,	*Swaar,*
Early Joe,	*Westfield Seek-no-further,*
Baldwin,	*Rambo,*
Ribston Pippin,	*Esopus Spitzenberg,*
Red Canada,	*Roxbury Russett,*
Gravenstein,	*Autumn Strawberry,*
Red Astrachan,	*Green Sweeting,*
Lowel,	*Munson Sweeting,*
Dyer,	*Talman Sweeting,*
Porter,	*Summer Rose,*
Fameuse,	*Early Harvest,*
Yellow Bellflower,	*Hawley or Douse,*
St. Laurence.	

I will pack and send, at One Dollar per hundred, either by mail or express.

I refer to Mr. Vick, of the Gen. Farmer. All orders must come post paid.

Virgalieu, Osband's Summer, Onondaga or *Swan's Orange*, pear Scions, at Three shillings per dozen.

☞ In all cases where it is possible, I will send specimens of the *Northern Spy* apple. JAMES H. WATTS.

Rocheste, Feb, 1851.

For Sale.

A FARM in the easterly part of Walworth County, Wisconsin, on the Plank Road leading from Racine to Jamesville. Said Farm is well located in a healthy, pleasant and thriving part of the State, and is well calculated for a large farm, or it can be conveniently divided into three or more small ones, and each supplied with wood and water. The general surface has an inclination south and east.

In the centre, where the buildings are now located, there are four or five hundred Fruit Trees of the various kinds. Some have commenced bearing, so that the occupant now enjoys a comfortable supply of delicious fruit.—There is about two hundred acres under the plow. In fact, so far as good roads to important places, mills, school houses, nurseries, &c., are concerned, this place is as well located as one could desire.

But as no one will purchase upon the strength of this notice without first viewing the place, it will only be necessary for one to call and satisfy himself, when a trade can be made on accommodating terms. Any information can be obtained in reference to the same by addressing A. G. COLE, at Burlington, Racine County, Wisconsin. February, 1851.

DENTAL NOTICE.

AS it has been currently reported that I have left the business and the office has passed into other hands, I would beg leave to state to my friends and the public, that I am yet to be found at my office in the Emporium Block during week days from 7½ A. M. to 5½ P. M., in every way prepared to insert the latest improved Mineral Teeth on California Gold, in a style of finish not to be surpassed in the State, and to fill decayed natural teeth so as to preserve them during life. All of which work is warranted not to fail.

Morgan's Premium foil, *Gold and Tin*, at all times on hand for sale.

☞ Office, No. 6, second floor, Emporium Block, corner North St. Paul street, Rochester, N. Y.

March, 1851. ANSEL A. MORGAN.

Monroe Nursery.

THE subscriber deems it almost superfluous to publish an advertisement at this time, from the fact that his Nursery is so universally known; yet he would beg leave to say to his friends and the public, that his experience as a Nurseryman of eight years is certainly some guaranty that the articles purchased of him would be correct and adapted to modern cultivation. Of the different fruits, he only cultivates a few varieties, such as has been proved and acknowledged to be the best.

He has a good stock of Apple, Pear, Peach, Apricot, Grape, Shrubs, Tuberous, Bulbous and green-house plants at reduced prices. Dahlias also of latest varieties.

Greece, March 1, 1851. [3-3t.] CHAS POWIS.

THE GENESEE FARMER,

VOLUME XII, FOR 1851.

Fifty Cents a Year, in Advance.

FIVE Copies for $2; Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

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DANIEL LEE,

December, 1850. *Rochester, New York*

THE NEW YORK REAPER.

MANUFACTURED BY SEYMOUR & MORGAN.

THE undersigned after many years experience in the manufacture of the different Reapers heretofore used, are at last, by the application of new principles lately patented, and to which they have the exclusive right, prepared to offer to the farmers of the United States a

PERFECT REAPING MACHINE,

which in durability of construction, perfect manner of cutting grain and the ease with which it may be worked, *has never been* equalled.

The following are some of the advantages possessed by this Machine over any other heretofore used:

1. The Finger-piece is placed within the circumference of the driving wheel, and the other ground wheel placed nearly opposite, and greatly increased in size, which lessens the power necessary to work the machine at least one-third, and does away with all difficulty in backing and turning.

2. The method of changing the cut is so improved that it can be done instantly on the small ground wheel by means of a lever, and on the driving wheel in much less time than in any other REAPER.

3. The sickle or knife is constructed of patent hollow teeth which CANNOT BE CLOGGED, and which in case of accident can be repaired by any good blacksmith without the least difficulty.

4 The man is placed on the backside of the platform where he has his work directly before him and is capable of performing it in a perfectly natural and easy manner, when compared with the old way of stretching from behind the gearing, with his back towards the team.

5. The gearing is of new and improved construction, combining GREAT STRENGTH AND DURABILITY with perfect simplicity of arrangement, and possesses *Great Advantages*, in many respects, *over all other* similar machines.

We are now manufacturing several hundred of the above Reapers for the Harvest of 1851, and are prepared to receive orders of purchasers for the same Our terms of sale, warranty, &c., will be *as favorable as ever*, and we shall spare no pains to make our work satisfactory; as we are

BOUND TO KEEP AHEAD

of all other manufacturers in the quality of our Machines. We will cheerfully give further information to any one who may address us personally or by mail. SEYMOUR & MORGAN.

Brockport, N. Y., Feb., 1851.

We would here take occasion to refer to a difficulty with C. H. McCormick, growing out of the fact, that we last year manufactured *and sold* a Machine of our own getting up, instead of paying him a patent fee for the privilege of making his "Virginia Reaper" which had been thoroughly tested, and found to be very unpopular with a large portion of the farming community.

The Machine made by us did not in the slightest particular infringe upon any patent of the said McCormick, but the plea was made use of as a bug-bear with which to frighten farmers from the purchase of our Machines, hoping thereby to dispose of some portion of a large number of Virginia Reapers which are now scattered throughout the country (condemned) and now unsold. The Machine we are manufacturing contains none of the parts complained of as infringements, which was only in the position of the Raker; having now placed our Raker in a more favorable position that matter of dispute is done away with and no person need fear the complaints of the maker of the "Virginia Reaper" as he will naturally feel sore that he can no longer monopolize the business of manufacturing Reapers to the great damage of all interested except himself.

The following are extracts from Letters received by us:

West Liberty, Logan Co, Ohio, Aug. 1, 1850.

GENTS:—It is with satisfaction that I inform you that the Reaper I purchased of you, performed equal to my highest expectations, and I think it can justly claim precedence over either Hussy's or McCormick's, not only in the construction of the machinery but also in the manner in which it cuts, and performs its work The greatest improvement is in the cutting apparatus which is far superior to any other in use here, and is just what has long been wanted. All who have seen your Machine have expressed for it a decided preference to any other. Yours, respectfully,

J. P. BUFFINGTON.

Urbana, Cham. Co., Ohio, Oct. 18, 1850.

GENTS:—I bought one of your Reapers for last harvest, and cut my own harvest of about 150 acres with it. The Reaper performed to my entire satisfaction; it will cut wet and grassy grain and corn stalks without choking. I have seen all the other kinds of Reapers work and believe yours to be the best Reaper ever introduced into this State. Yours, &c., ANDREW MCBETH.

Covington, Wyoming Co., N. Y., Aug. 10, 1850.

MESSRS. SEYMOUR & MORGAN—GENTS:—We have just finished cutting our wheat, and a very bad harvest we have had, it being bad weather and our wheat very badly lodged down, notwithstanding your Reaper has done well, taking up our lodged grain beyond our expectations, we think it a good way to cut grain doing it with less expense than any other way.

Yours, respectfully, JAMES GAY.

Janesville, Wisconsin, Nov. 1, 1850.

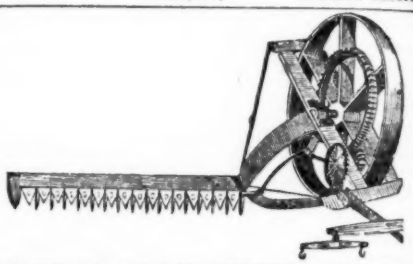
MESSRS. SEYMOUR & MORGAN—GENTS.—I own one of McCormick's, one of Hussy's, and one of your Reapers; upon giving each a fair test the present season I found that where both others clogged so that it was imposible to use them, yours worked like a charm; and I have no hesitation in pronouncing it much the best in use.

FREEMAN HITCHCOCK.

Urbana, Cham. Co., Ohio, Oct. 19, 1850.

MESSRS SEYMOUR & MORGAN—GENTS:—I purchased one of your Reapers for last harvest. I have seen the different kinds of Reapers work and consider yours far superior to any other.

Yours, &c., EMANUEL SHOUPE.



KETCHUM'S PATENT MOWING MACHINE.

THE subscribers having purchased the entire interest of the inventor, Mr. Wm. F. Ketchum, and also the interest formerly owned by S. W. Hawes, are now manufacturing the above Machine in the city of Buffalo. The Machine has been greatly improved, and is fully capable of performing all we recommend it to do, and capable of cutting 12 to 15 acres of grass per day with 1 span of horses

The price of the Machine is $100.00 with one sett of knives, and $110.00 with two sett of knives.—Cash in Buffalo.

Any information wanted, or orders left with Mr. GEORGE SHIPPER, Scottsville, Monroe Co., or Mr. MORGAN BUTLER, New Hartford, Oneida Co., will meet with prompt attention

February, 1851. G. W. ALLEN & CO.

C. J. RYAN & CO.,

WOULD most respectfully call the attention of the public particularly the trade, to their Nursery Stock, consisting in part as follows:—

Apple Trees, 3 and 4 years old, all the most popular long keeping varieties.....$18 per 100.

Northern Spy, 3 and 4 years old.....$25 per 100.

Cherry Trees, the principal varieties, from 5 to 10 feet high, straight stems, and headed.....$20 per 100.

HEDGE PLANTS.—Arbor Vitæ, American, 1 to 4 feet high, $5 per 100; Hemlock Spruce, 1 to 4 feet high, $5 per 100; Privit, strong thrifty plants, $4 per 100.

5000 Giant Rhubarb Roots, fine productive sorts, for hotels and market gardeners.....$10 per 100.

Myatt's Victoria Rhubarb, *true sort*.....$4 per doz.

Downing's Colossal, extra fine flavored and tender .$4 per doz.

1500 select and very choice Verbenas, in fair condition for bedding out, such as Anacreon, Scarlet Defiance, Polka, Lovell, Rosy Morn, and a dozen other varieties.....$1.50 per doz.

2000 Petunies, all the best self and varigated colors, strong and thrifty plants.....$1.50 per doz.

500 Double White Feverfews, fine for planting in beds or borders.....$1.50 per doz.

Also, Buddlyas, Salvias, Neirembergias, &c., in large quantities at low rates

1000 Scarlet Geraniums, dwarf varieties, best adapted to beds.....$2 per doz.

5000 Prize Double Dahlias ☞ at low rates.

A great improvement on any before offered—75 varieties of them are those which attracted unusual notice in Reynold's Arcade, Rochester, last year, and obtained the first class prize wherever exhibited.

60 still newer and finer varieties have been added the last autumn at great expense and are now under extensive propagation —will be ready for delivery in pots 1st May.

☞ Roses on their own roots.

A superb collection of Hybrid Perpetuals, Noisette Tea, Bourbon, Bengali and Prairie Running Roses, cultivated largely.

☞ Rochester and Charlotte Plank Road Nurseries, Rochester, N. Y. City Office, 16 Reynold's Arcade, Rochester, N. Y.

March 1st, 1851

1851 ROCHESTER 1851

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Lead Sash, and Diamond Glass, for church or cottage windows, supplied to order. M. F. REYNOLDS.

February, 1851

GUANO.

WE are in daily expectation of arrivals of Peruvian Guano. Those wishing to order, will do well to do so at the earliest moment. A. B. ALLEN & CO.

New York Agricultural Warehouse and Seed Store, 189 and 191 Water street. [2-3t-o]

GREAT BOOKS

FOR FARMERS, GARDENERS AND HORTICULTURISTS, AND A

RARE CHANCE FOR AGENTS TO MAKE MONEY.

JOHN P. JEWETT & COMPANY, Publishers, Nos. 17 and 19 Cornhill, Boston, take pleasure in announcing to the intelligent Farmers, Gardeners, and Horticulturists of the United States that they have at length completed their valuable collection of works on Agriculture, and its kindred sciences, and that the two last of the series are now in the hands of the stereotypers, and will be ready for delivery to subscribers and others, on or before the first day of March. The two volumes now in press are, first—

BRECK'S BOOK OF FLOWERS,

By Joseph Breck, Esq., of Brighton,

For many years editor and publisher of the New England Farmer, and one of the most distinguished Florists in America. This volume contains the results of the practical experience of a man of taste and science, and is, without doubt, the most thorough and reliable book on the cultivation of flowers, and the laying out of flower gardens, to be found in any language; it is emphatically the Ladies' and Gentlemen's complete Floral Vade Mecum. This book will be in 12 mo. form, containing about 336 pages, fine cloth binding, and we have determined to sell it at 75 Cents, to bring it within the means of all, and to ensure a large sale; as it is a book which every lover of flowers must own.

The second in the series is—

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By one of the most distinguished Gardeners of New Jersey. This is truly a practical work, avoiding useless, and to the masses, unmeaning technicalities, the author handles his subjects with the skill of a thoroughly versed, common-sense practitioner. With the aid of this volume, the merest Tyro may rapidly advance through the various stages of Horticultural knowledge, to complete success. A simple, practical and cheap work on this subject has long been needed. The price of this book will be 50 Cents, —12 mo., 216 pages, handsomely bound in cloth.

The third book is—

A TREATISE ON HOT-HOUSES,

By Robert B. Leuchars, Garden Architect.

This work, by Mr. Leuchars, who is one of the most distinguished among the many Scotch Gardeners of America, is a practical treatise on the CONSTRUCTION, HEATING AND VENTILATION OF HOT-HOUSES, including CONSERVATORIES, GREEN-HOUSES, GRAPERIES, and other kinds of *HORTICULTURAL STRUCTURES*, with practical directions for their management in regard to LIGHT, HEAT AND AIR. Illustrated with more than *Seventy Engravings*. This is the first and only work of this kind ever published in this country or in Europe, and is recommended very highly by Professors Silliman and Dana, of Yale College, and by many other scientific gentlemen. Price One Dollar. It is a very learned work, and an invaluable one to any person who owns, or who intends to erect, either of the structures upon which it so ably treats.

The fourth book is—

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THE DISEASES OF ANIMALS,

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30,000 copies of which have already been sold, and the sale of which continues in a manner almost without a precedent. To every man who owns a horse, a cow, a pig, or even a hen, this work by Mr. Cole is of more value than ten times its cost.

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OR, FRUITS AND FRUIT TREES OF AMERICA,

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We are now prepared to offer to capable, responsible and energetic Book Agents a chance for making money, such as seldom occurs. With the above five works, an Agent of tact or ability could hardly fall upon a spot so barren that he could not dispose of one or more of these works, and in many cases would sell one of each; and in populous districts, a large number of copies could be sold daily. We intend to district out the New England States, mostly into counties. Also, the States of New York, Pennsylvania, New Jersey, Ohio and the Western States, we should prefer to dispose of to some one individual in each State, for him to district out into sub-agencies.

The books will all be ready for delivery by the 1st of March, and it is important that the various Counties and States should be disposed of before that time. A cash capital of from $30 to $50 will be needed by every Agent for a County, and a much larger sum by a State Agent.

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JOHN P. JEWETT,
17 & 19 Cornhill, Boston.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

A. SAUL & CO. beg leave to call the attention of *Dealers* and *Planters* of Trees, and the public in general, to their very large and complete stock of

FRUIT AND ORNAMENTAL TREES,

Which they offer for sale the coming spring. The Trees of their Nurseries are all *grown* on the premises and propagated under the immediate supervision of Mr. Saul, whose long connection with this establishment, is some guarantee for the accuracy of the stock now offered for sale. It consists in part of over—

20,000 Pear Trees, 5 to 8 feet high, and embracing all the leading standard varieties, as well as those recently introduced, of merit, either of American or Foreign origin.

20,000 Apple Trees of *extra size*, 8 to 10 and 12 feet high, including every variety worthy of cultivation.

10,000 Plum Trees, 5 to 8 feet, of every known kind of reputation, as well as all the novelties of recent introduction.

10,000 Cherry Trees, 6 to 8 feet and over, among which may be found all the desirable and choice varieties.

A large stock of handsome Peach, Apricot, Nectarine and Quince, in every variety.

Also, Grape Vines (native and foreign,) Raspberries, Gooseberries and Currents, and Strawberry plants, of all the most approved kinds, as well as excellent roots, such as Asparagus, Rhubarb, Sea Kale, &c., &c.

Pear on Quince, Cherry on Mahaleb, and Apple on Paradise stocks—for Pyramids or Dwarfs for garden culture, and embraces all the kinds that succeed on these stocks.

DECIDUOUS AND EVERGREEN ORNAMENTAL TREES AND SHRUBS.

Embracing all the known kinds suitable for street planting of *extra size*; also, the more rare, and select, as well as all the well known kinds suitable for Arboretums, Lawn and and Door-Yard planting, &c., including Weeping Trees, Vines, Garden and Climbing Roses in great variety. Hybrid Perpetuals, Hybrid China, Hybrid Bourbons, Hybrid Damasks, Hybrid Provence, and Bourbon, Tea, China, and Noisette, and Prairie and other Climbing Roses.

A large quantity of Arbor Vitæ for Screnes, Burkthorn, Osage, Orange and other hedge plants.

The above will be sold on as liberal terms as similar stock can be purchased elsewhere.—For further particulars see catalogues, a new edition of which is just issued, and will be forwarded to all *Post-Paid* applicants by mail. A liberal discount will be made to persons who buy to sell again, and extensive planters on their own account.

P. S.—Frieght paid to New York.
Newburgh, March 1st 1851. [3-2t]

Agricultural Warehouse and Seed Store,

QUINCY HALL, (OVER THE MARKET,) BOSTON.

THE proprietors having recently enlarged their Warehouse, and increased their Works at Worcester, would respectfully invite the attention of planters and dealers in Agricultural Implements, Garden and Field Seeds, &c., to their stock, comprising the largest and best assortment in the United States, which are offered at low prices.

Of Plows we have the greatest variety of kinds and sizes,—Improved Sod Plows for flat furrows,—Improved Scotch do for lapped furrows,—Improved Stubble do. which are especially adapted to deep tillage, and varying from 6 to 12 inches in depth. Self-Sharpening, Hill Side, Sub Soil, Double Mold, Corn, Cotton, Sugar and Rice Plows.

Cylinder Hay Cutters, Smith's patent Lever Gate and others, Patent Corn Shellers, with and without Separators, Seed Sowers of various sizes and prices, Bachelder's patent Corn Planters improved. Fanning Mills of various sizes, Horse Powers, Threshing Machines, Themometer Churns, Robbin's patent Centrifugal do, Cylinder do, Dash do, Corn and Cob Crushers, Corn Planters, together with almost every article wanted on the Plantation, Farm or Garden

Illustrated Catalogues sent gratis on application, post-paid.

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Boston and Worcester, Mass., March 1st, 1851.

To Nursery Gardeners.

A GENTLEMAN wishing to establish a Nursery Garden, desires to enter into arrangements, for that purpose, with a person who understands the business. 8 to 12 acres, or such other quantity as may be required, of excellent land will be furnished, with a comfortable dwelling house, and the use of a Green House, rent free, till the business could yield a return. Situation—Two miles from Kingston, Canada, on the high road. A very moderate capital would suffice.

Apply (if by letter, post paid,) to Messrs. ELLWANGER & BARRY, Rochester, N. Y., or to J. H. W., Kingston, Canada.
February, 1851.

EMERY & CO.'S

NEW YORK STATE AGRICULTURAL SOCIETY'S FIRST PREMIUM

RAIL-ROAD HORSE-POWER & THRESHER.

THE attention of the farming public is solicited to the newly improved Rail Road Horse Power, as now made and offered to them by the subscribers.

Having been long engaged in the manufacture, sale, and introduction of agricultural machinery, they have had ample opportunities to ascertain the wants of the farmers as well as the merits of the various machines now in use—they have endeavored to better adapt such as they manufacture for the purposes designed, and having paid more attention to these Horse Powers than almost all other implements together, they flatter themselves that they have succeeded in so improving the endless chain power as to do away the strong prejudice against its use, and at the same time so adapted it to a greater variety of uses that no farmer of any considerable extent will do without one when once having seen them in operation.

As their power is so dissimilar to those chiefly made and sold by them previous to last season, and from any others now in use, that they deem it an object to themselves, as well as an interest to farmers, to give a description of its principal parts with cuts, as follows:

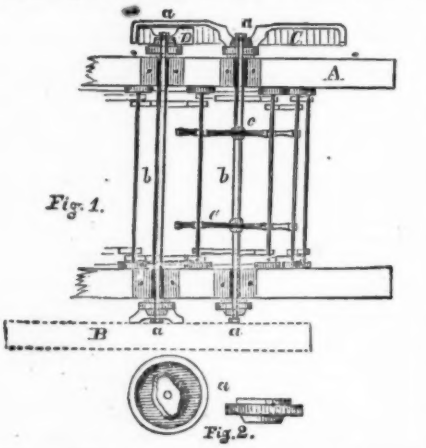

Fig. 1.

Fig. 2.

Fig. 1 represents the top view of the running geer with the flooring off. A, A, the sills, supporting the bearings and main shafts. B the band-wheel, 3 feet diameter connected to shaft C the converge geer wheel connected to shaft D the pinion working inside the converge wheel and connected to shaft. a, a, a, a, the ends of the main shafts with couplings and nuts attached. b, b, the two main shafts of the power. c, c, the reels (iron) on the forward main shaft which supports the endless platform in its revolution at the forward or upper end of the power. These reels, as also the couplings, are all fitted firmly and permantly to the main shafts as represented.

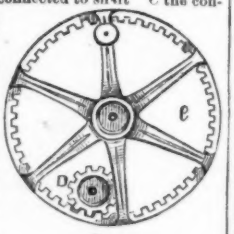

Fig. 3.

Fig. 2 a represents a face and edge view of the couplings which are fitted permently to each end of each main shaft, (enlarged.)

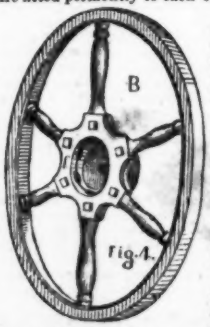

Fig. 4.

Fig. 3. e represents a side view of the converge wheel with a concave or sunken hub and fitted to the shafts and couplings a, a, a, a, and confined with a nut or screw. One of the arms of this wheel is provided with a projection plate to receive a wrist pin for driving a pitman, often convenient in sawing wood, churning butter, etc., etc. D represents a side or face view of the pinion, which is about ¼ the diameter of the converge wheel, and working into it; this has also a concave hub and fitted to couplings and confined by a nut, the arms of the converge wheel passing over it when in operation.

Fig 4. B represents a face or side view of the band wheel, three feet diameter, the hub of which is formed of two iron plates so made as to form cavities to receive the spokes as represented, and when bolted through the spokes and plates forms a strong and substantial wheel. The back plate is also concave to receive a nut, fastening and fitting also to each and all the couplings.

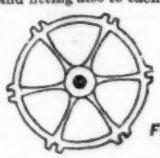

Fig. 5.

Fig 5 shows the side view of one the reels—two of which are used on the forward main shaft. The small rods of the endless platform, fitting in the cavities as they revolve, thereby giving motion to the reels and shaft, to which they are firmly and permantly fastened.

The diameter of these reels is such that they receive from the platform, with the ordinary walk of a horse, about fifty-five revolutions per minute, which it communicates to the converge wheel outside the frame. This wheel in its turn communicates its motion *in the same direction* to the pinion working into it, which pinion, being only one-fourth the diameter, receives two hundred and twenty revolutions per minute—the band wheel B being attached to the opposite end of the pinion shaft as represented. This wheel being three feet diameter gives sufficient speed for threshing, sawing wood, grating apples, ginning cotton, cutting and grinding feed, etc., etc.

When the power is to be used for churning, (with band,) driving grindstones, corn shellers, or when a slower motion is desired, the band wheel can be attached to either end of the reel shaft, at fifty five revolutions per minute. Should it be desirable to have a still slower motion for elevators, hay presses, driving paddle-wheels for small boat, instead of propelling them by manual labor on many of our streams and lakes, in the wood and lumber business, etc.—all that is necessary is to put the pinion on the reel shaft and the converge geer wheel on the other, working into it, and we have a motion of about fourteen revolutions per minute, and with an increased power in proportion to the decrease of motion, the horse walking the same speed in all cases.

The advantages of these arrangements are too plain to require comment—only one or two need be mentioned, one of which is, the removing the whole of the geering from under the horses and from the dust and dirt always about the machines, where it may, if desired, be boxed up and kept perfectly clean, requiring very little oil or care to keep them in order. There is no possibility of breakage, or wear, or slipping of gearing, as is unavoidable in all other powers which we have heretofore sold or seen.

The platform, small shafts, rail-tracks, and wheels, are similar to those made and sold by us for several years past. These improvements having been tested in upward of two hundred Horse Powers, made and sold during the last season, and invariably given good satisfaction, and had the preference over any we have before made, we have no hesitation in commending them to the favorable notice and trial by all farmers or others desiring a cheap, efficient, and durable Horse Power. For further particulars see catalogues of "The Albany Agricultural Works, Warehouse and Seed Store," furnished gratis on application to

EMERY & CO.,
369 and 371 Broadway, Albany, N. Y.

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